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American Journal of Public Health
and THE NATION'S HEALTH

Official Monthly Publication of the American Public Health Association

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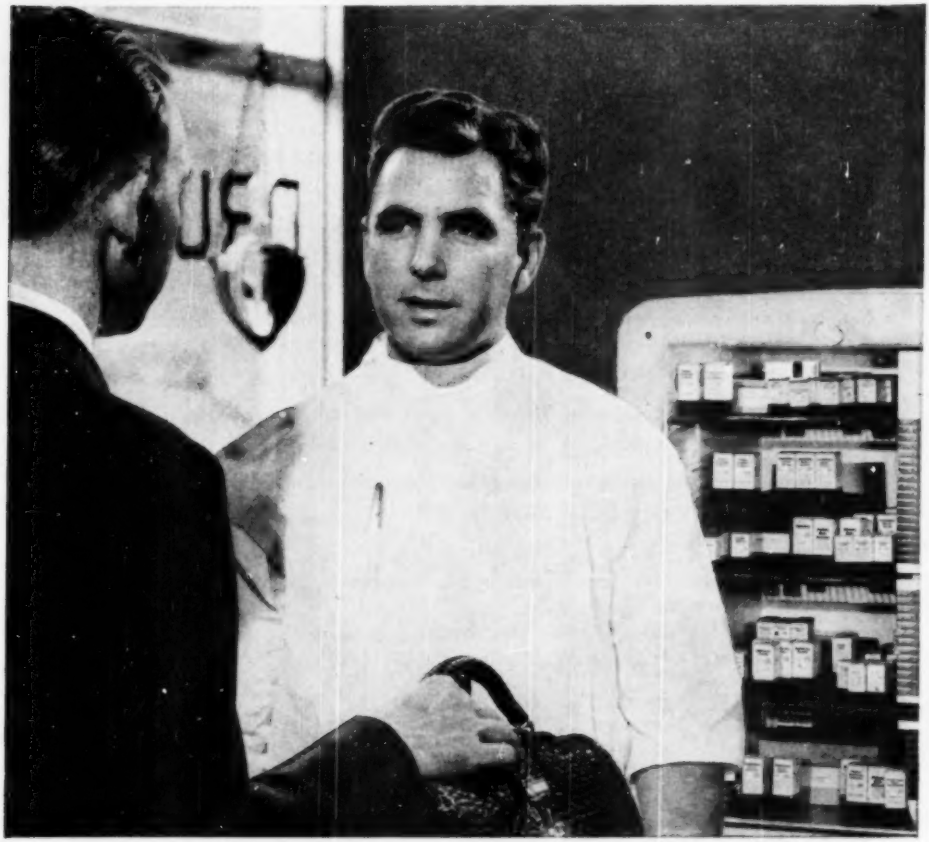

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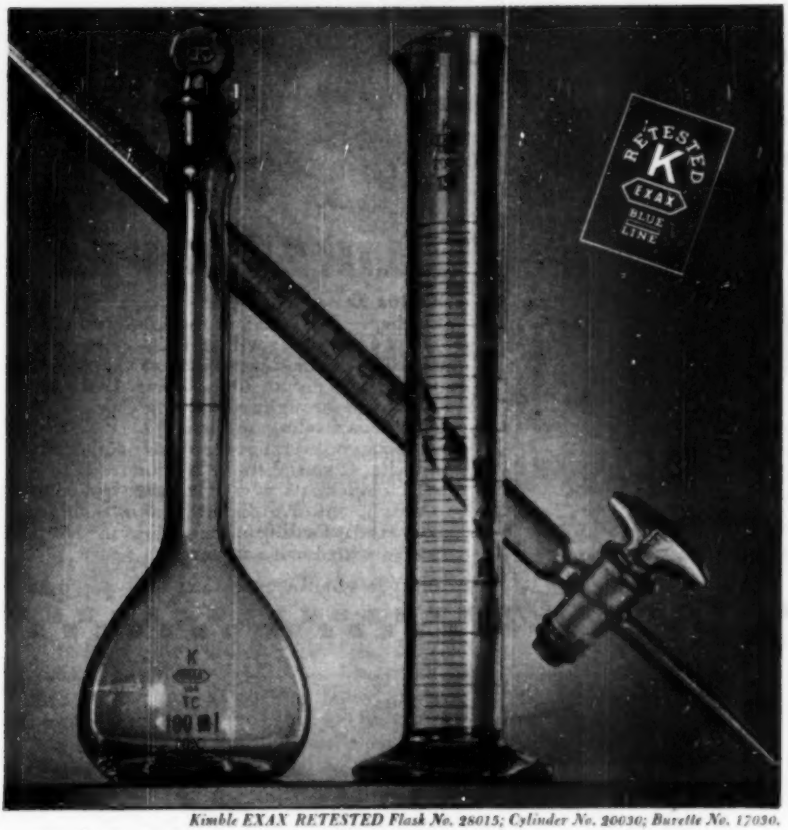

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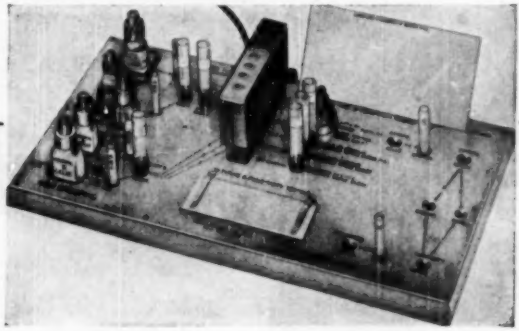

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1. "A Note on Blood Grouping and Cross Matching with Special Reference to a Convenient Grouping Cross Matching Board." I. W. Brown, Jr., M.D. In press.

2. "The Demonstration of Anti-Rh Agglutinins —An Accurate and Rapid Slide Test." L. K. Diamond, M.D. and N. M. Abelson, M.D. J. Lab. & Clin. Med., Mar. 1945.

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[PAS]

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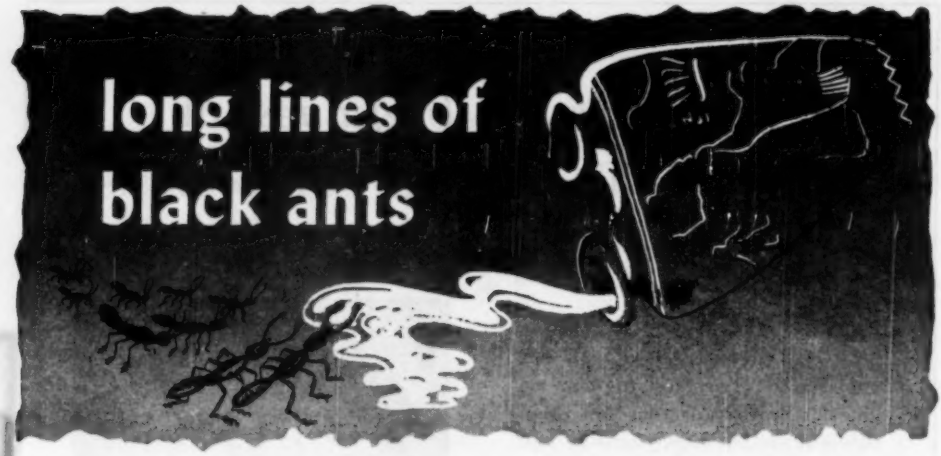

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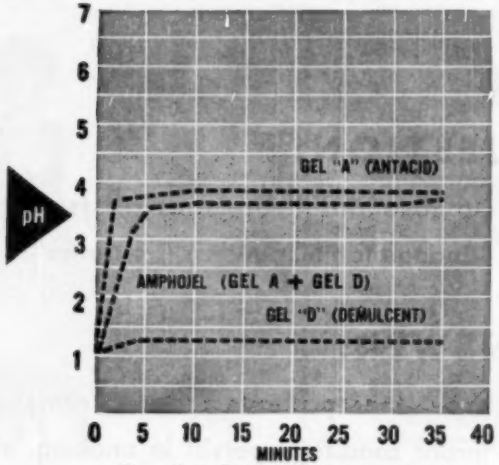

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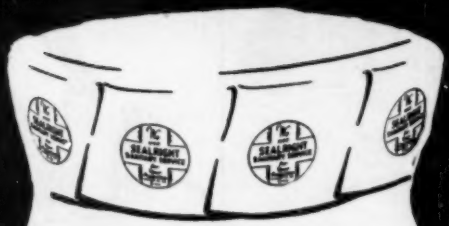

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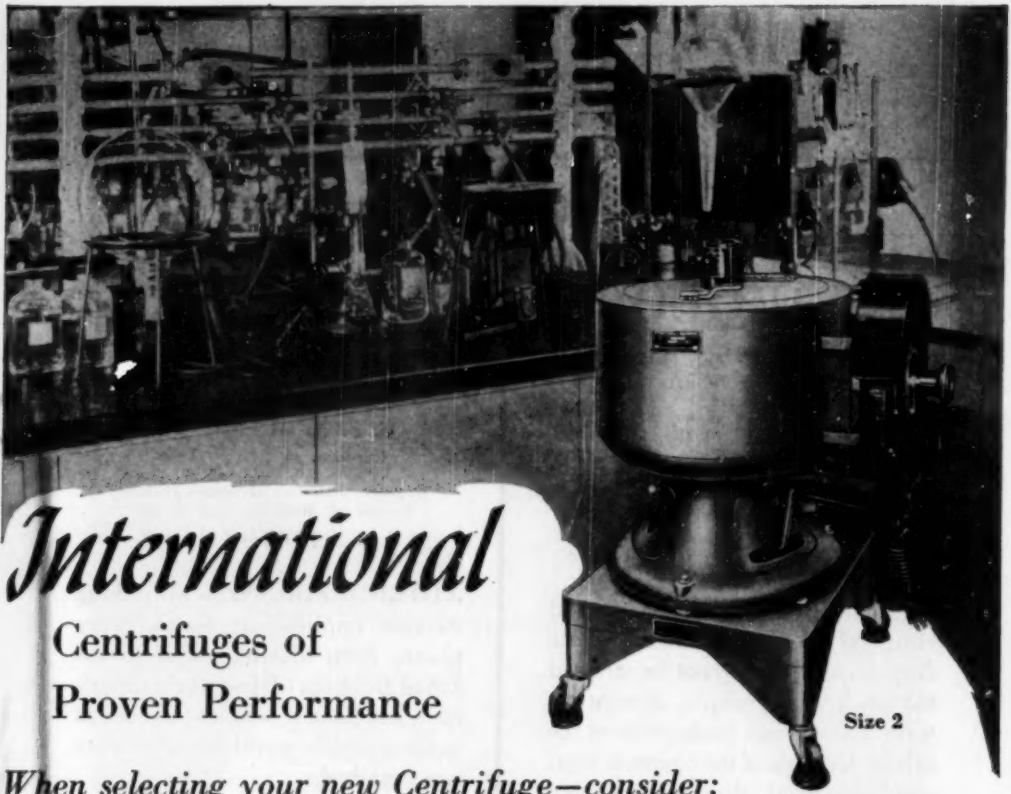

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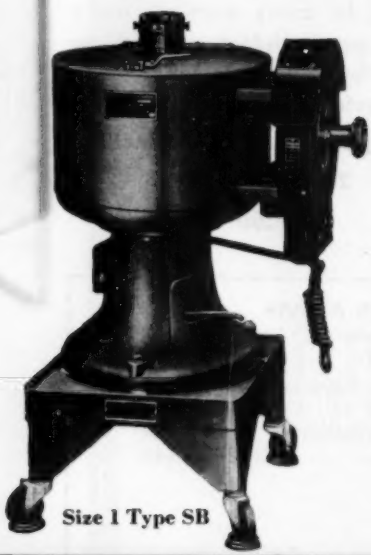

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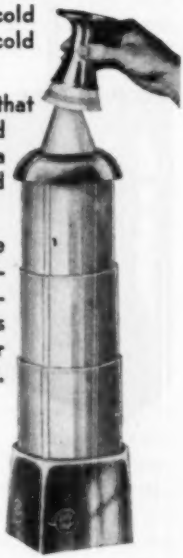

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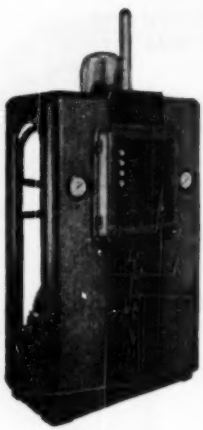

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The Public Health of Tomorrow*

CHARLES F. WILINSKY, M.D., F.A.P.H.A.

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IT is indeed a great satisfaction, in the midst of the bitterness and acrimony which engulf the world today, to meet as we do tonight in peace and in concord, and to assemble in universal accord on the importance of health as an individual and community asset. At a time in the history of civilization when hatred, engendered and stimulated by political, philosophical, and ideological differences results in serious unrest, we may well point with pride to the fact that in the onward march of human progress and in man's constant struggle for survival, and to improve the lot of humanity, nothing has contributed so much to changing the map of the world as those magnificent contributions which have played so great a part in the prolongation of life, the prevention of disease, and the promotion of health. Wars, with all of their bitter implications and tragic results, begin and end, have come and gone, and history is replete with much evidence of their failures as a solution. Yet, it is gratifying to find that the war on man's constant enemy, disease, is a continuing one with beneficent results reflected in longer and happier living and the reduction of many former scourges of mankind. Nowhere more than in this section of the world has this appreciation and emphasis been so continuing a one, and yielded more satisfying results.

Our recognition of the fact that there is still very much to be done does not lessen the joy and satisfaction occasioned by the progress which has taken place as a result of the untiring efforts and devotion of those who have participated in improving the health picture of the world. This message of improved conditions which falls on the receptive ears of those who labor in the vineyard of public health is in no small degree due to the increasing realization on the part of the American people of two inescapable facts—one, that health is a precious individual and community asset, and two, that it is in a marked degree attainable by the application, in sufficient measure and on a high level, of those activities which play an important part in the prevention of disease and in the treatment of illness.

In facing the future, and expressing our appreciation of those achievements which have played their part in making improved conditions possible, we may

* Presidential Address presented before the American Public Health Association at the Seventy-seventh Annual Meeting in New York, N. Y., October 27, 1949.

well pay tribute to the illustrious past. It is not my purpose to pose as a historian, and yet some of the milestones on the road of public health evolution are worthy of emphasis.

The period about a century ago, so well characterized by Professor Winslow as the "great sanitary awakening," may well be said to mark the beginning of man's increasing interest in that which has been defined as the modern public health movement. Here, and abroad in greater measure, many factors played an important part in giving impetus to public health improvement. Increasing social consciousness, progress in the sciences, the great industrial awakening, reactions to conditions under which people labored and dwelt, all have contributed to this aroused interest.

No attempt to paint a picture of public health progress would do justice, without tribute to the epochal influence of Chadwick and Simon who have been so deservedly credited with providing, about a century ago, the necessary impetus for furthering the movement so close to our hearts. To these men must be attributed the early vision, interest, and efforts upon which the foundation of the relationships between poverty, overcrowding and disease was clearly demonstrated.

Last year, at the 76th Annual Meeting of our Association in Boston, we justifiably paid tribute to Lemuel Shattuck, a great citizen of Massachusetts.

His perception and wisdom made possible that historic document, the *Shattuck Report*, embodying recommendations which have contributed much to the advancement of the cause of public health in this country and in the world.

I am sure that we could agree that if a true history of the world were to be written, no finer chapter would be found than that concerned with man's conquest of disease. Dramatic pages would be devoted to stories descriptive of the conquest of smallpox, yellow fever, cholera, typhus and typhoid fevers as well as the parts played by Jenner, Lister, Pasteur, Koch, Welch, Ehrlich, and many others.

We fittingly celebrate tonight more than three-quarters of a century of what may safely be considered progressive public health development and improvement. This harmonizes with the founding 77 years ago of The American Public Health Association. It is stimulating and intriguing indeed to dwell upon the progress which has taken place during the life of our Association and to realize what the application of changing knowledge from time to time in the field of health conservation has done for the people of America, yes—and of the world. When our organization was first founded, the expectancy of life at birth was less than 40 years. At the beginning of the present century, this expectation had been increased to somewhat less than 50 years. Today we are rapidly approaching the Biblical promise of three score years and ten. We may point with great pride to the part played in this progressive development by members of this Association. We are reminded of the influence of Hermann M. Biggs and William H. Welch, Walter Reed, Theobald Smith, Wade H. Frost, William Gorgas, Edgar Sydenstryker, Hans Zinsser, and others. As we scan the list of the former leaders who have served as Presidents of the American Public Health Association and who have been called to the great beyond, we think of the influence for public good of John S. Billings, Henry P. Walcott, Samuel H. Durgin, Carlos J. Finley, William T. Sedgwick, Mazÿck P. Ravenel, Charles V. Chapin, William H. Park, Milton J. Rosenau, and others. As we measure the great accomplishments of these leaders who have gone to their reward, we are reminded of our good fortune in having in our midst today men and women whose contributions to the public health field reflect great credit not

only upon them but also on our Association. Were it not for the hazard of unintentional omission, it would afford me much satisfaction to list the many in our ranks who are contributing constantly to our public health knowledge and techniques.

In a particular sense of gratitude we may well afford to pay tribute to one of our great leaders whose zeal for better health organization has been crystallized in his staunch championing of the development of local health units. This emphasis is bearing fruit and is reflected not only in an increasing interest but in the development in a greater measure of this type of community effort. We are equally grateful to another leader of our Association who has done so much in emphasizing the important need of better housing and its relationship to improved health. These are two great examples of the influence of our membership upon the progress in the field of public health.

The joy and satisfaction, therefore, which is justifiably ours tonight is due in no small measure to those who in varying ways have participated in the continuing effort for better health for the American people. For this great privilege, we owe much to that small group which met in 1872 and charted the needs for the development of a national organization of health workers. The wise leadership of Stephen Smith and his foresightedness is reflected in the present federation, 12,000 strong, concerned with the improvement of public health. We, as an Association, were of influence years ago when our membership totalled 500. The growth of our membership and the contribution of our leaders through the years command the respect of all who have a true understanding of the purposes and mission of the American Public Health Association. The studies and publications which our members have made possible, the standards which our committees have established, the principles we have stressed, the education we have fostered and encouraged have all played their part in the advancement of the cause of public health.

I deem it fitting at this moment to present very briefly as a pattern, a picture of a few of the activities in which the Association has engaged during the past year and which, I am content, not only reflect the desires of the membership of the organization but are in keeping with the ideals and objectives of those who saw value more than three-quarters of a century ago in the formation of the American Public Health Association.

I. The Executive Board during the past 12 months published a report on recommended salary levels for public health physicians. Those of us who face the everyday problems of seeking qualified personnel appreciate in its fullest measure the inadequacy of compensation received by those who hold responsible positions concerned with the adequate health protection of the communities in which they serve. May I at this moment lay stress on a serious and what I believe a most important thought, namely: the obligation the Association should assume for the extensive education of the public at large into a better understanding and appreciation of the importance of an adequate public health program to them as individuals as well as to their communities. In this field lies the opportunity for best demonstrating the pronouncement of Hermann M. Biggs to the effect that "public health is purchasable, and within natural limitations communities can determine their own death rates." The interpretation into everyday language of this great challenge to public health workers is worthy of the most serious endeavors of us all. The role that good training and experience play in maintaining adequate standards of health must be interpreted to the public so that they may become our very necessary and willing

allies in support of justifiable programs. Idealistic as we may be, satisfactory compensation by comparison with those received in the practice of medicine and other professions deserves the ready recognition of all who would be the beneficiaries of adequate public health services. Dignity will not be impaired by the emphasis placed on the principle that a complete public health program requires the expenditure of sufficient funds that health protective measures which science has placed at the disposal of organized society will be made available. High standards and adequate service are dependent upon qualified personnel. The public must be attuned not only to the acceptance of this philosophy but to a willingness to support it.

I trust that I may not fail in my most earnest desire to impress you with the importance of public opinion. Good health is desirable and we, as public health workers, believe, in a marked degree, attainable. Experience has taught us that many diseases are preventable. We must share this knowledge with the public and acquaint them with the techniques which make disease prevention and health protection possible. There is no sounder weapon than an aroused and well informed citizenry.

II. The American people have been taught much and have read a great deal about public relations. The Association has developed during 1949 a program in this field which offers promise and which we hope will make available to our membership proven techniques to be used in their own localities, for the furtherance of sound public support. It behooves us, therefore, as a national organization, through the instrumentality of public education and public relations carried on at a national, state, and local level, to make the American public understand what can, may, and should be done to obtain and to maintain life's most treasured possession, namely, good health and freedom from disease. The significance of industrial hygiene, mental health, accident prevention, rehabilitation, and utilization of our handicapped are but some of the neglected links in the chain of public health community service. The economic importance of a comprehensive public health program cannot be challenged if properly presented, and the rich dividends such a program yields may be made to appeal to the imagination of all.

III. One of the notable landmarks during the past year was the final establishment and approval of the American Board of Preventive Medicine and Public Health in which the Association has had a long and sound interest.

IV. I beg to call attention to what has been described as the extraordinary progress made with the 7th edition of *The Control of Communicable Diseases*. This important contribution of the Association has been approved by a number of governments, by many of the states and municipalities in North America, and we hope will become in time an official document of the World Health Organization.

V. It is with a mindfulness of the fact that we are indeed, in view of the progress which has taken place during the past 50 years, living in "The Century of the Child," that we call attention to the new Association Committee on Child Health. This group will concern itself with varied matters affecting the health and medical care of children.

VI. During the past year, the Association has played a most important part in coöperation with the American Hospital Association, the American Medical Association, and the American Public Welfare Association in the study of chronic illness. This is an example of integrated effort and relationship in a common cause.

VII. In July of this year, there was published in the *Journal* a statement by the Subcommittee on Medical Care on

the quality of medical care. This report represents a most valuable analysis of the issues involved in plans for public medical services.

VIII. It is pleasing to point out that the past year may well be regarded as the best in the Association's history, reflecting a higher income, a balanced budget, and a sound net asset picture. The varied activities of the Association were made possible not only by the earnest efforts of ably led councils and standing committees, but also, particularly, because of the tireless efforts of our most efficient Executive Secretary and his able staff, to whom we owe much.

In paying tribute to the past, I deem it pertinent to inquire: What of tomorrow?

An attempt has been made to enumerate some of the activities which have contributed to the advancement of the public health, and to pay tribute to those who have played active parts in the field of public health progress. One may safely predict, however, newer discoveries which will emanate from the stimulating, energetic, and constant efforts of those who concern themselves with health protection in all of its varied forms. As we apply ourselves to the newer techniques and responsibilities, we will be as vigilant as we have been in the past in our appreciation of the importance of environmental sanitation. We will recognize, as we should in increasing measure, the relationship of housing and overcrowding as factors in the spread of illness. We shall continue to be watchful in the application of our knowledge for the control of the communicable diseases. We will, even in a greater measure, accept our responsibilities for the promotion of personal hygiene. We will be concerned as never before with the importance of health education as we recognize the need for the dissemination of necessary knowledge in this field.

We will be obliged particularly to concern ourselves in a greater measure with those problems which have been created by the increase in the expectancy of life and which we must recognize as additional responsibilities of the vigilant health officer. The challenges of yesterday have become the needs and realities of today. The protection of maternal health, the better care of the growing infant, the pasteurization of milk, immunization procedures, an appreciation of the importance of isolating the infected person, a knowledge of the importance of nutrition, the protection of our water supplies—all have played their part in the prevention of unnecessary deaths with consequent increase in the expectancy of life. From the application of this knowledge have developed present responsibilities with their challenge to the public health worker of today and tomorrow. Heart disease, cancer, arteriovascular lesions, and diabetes have replaced and displaced our former leading causes of death. These illnesses require the combined efforts of the public health worker, members of the medical profession, the hospital, the clinic, and the health center. Medical schools are recognizing their educational responsibilities in this field by the creation and maintenance of departments of preventive medicine, thereby furnishing the graduate of medicine with the combined armamentarium for the practice of both preventive and therapeutic medicine.

In emphasizing the necessary interest of the health officer in the curative field it appears timely to point out that, irrespective of views on the methods employed for financing medical care, we may well agree on the importance of adequate medical service for all.

Our vision has broadened sufficiently to realize that the welfare of the sick, the care of the crippled child, the treatment of cancer and heart disease, the control of venereal diseases call upon the combined functions of prevention and treatment, and we have become

increasingly aware that the hospital occupies a most important place in the field of public health effort.

Certain patterns of responsibility for medical care are being developed, and I offer as an example the Baltimore plan under the able leadership of our colleague, Dr. Huntington Williams, where the combined efforts of the Health Department, The Johns Hopkins Hospital, and the medical profession have been integrated, with the resulting creation of adequate facilities for those in need of the same.

The necessary expanding needs for hospital beds are in a degree being made possible in the United States by financial support from federal sources under Public Law No. 725, and provision under that Act for aid in the development, not only of hospital expansion but of health centers, focuses attention upon the possibilities for the inclusion, particularly in our smaller communities, of health center activities within the wisely planned combination of hospital and health center.

We speak of "Healthy minds in healthy bodies," and we are familiar with the statistical picture of the enormous proportion of hospital beds devoted to the care of the mentally sick. We are tragically confronted with the lack of adequate facilities for the prevention and treatment of mental disease. We may draw some comfort, however, from the increasing realization of the potentials which exist for salvaging those so afflicted and which should stimulate the concern of those charged with the responsibility for community health organization.

These are but some of the important facets in the whole structural obligation of the health officer of today and tomorrow. In addition, I envision him in a desirable sense, as not only concerned with those practices in the field of public health which you and I accept as basic, and as influencing the promotion of health and the prevention of disease. I envision him as also interested in the broad field of social welfare, with all of its implications. The relationship of poverty to disease is an intimate one and the vigilant health officer cannot divorce himself from this problem, or fail to work and plan in accord with those concerned with their solution. His responsibilities, as I see them, include a concern for the existence in his community of good outpatient and hospital facilities. The problem of slum clearance and adequate housing must receive his earnest coöperation. He must have an understanding and interest in the relationship between a decent wage and adequate nutrition. He must be interested in the avoidance of duplication of health services, which always spells waste, and must be concerned with the filling of existing gaps so that there may be a more complete program to benefit the health of the people.

As I look optimistically to the future, I gaze reflectively upon the past. I beg in a reminiscent sense your indulgence in presenting a few statistical figures from my own City of Boston and presenting a picture of certain improvement which has taken place during the almost 40 years of my affiliation with our Department of Health. This is not offered as an example of maximum obtainable results during this period, but represents rather what I believe to be reasonably typical of the improvement which has taken place on a nation-wide level. These figures are the results of the application of fundamental public health knowledge and experience made available to public health workers in my and other communities.

In 1910 there were 2,250 infant deaths in Boston; in 1948, the most recent year for which we have complete statistics and with many more births taking place, there were but a fourth of this number. In 1910 we had 65 maternal deaths; this year 3. In 1910 we had 158 deaths from

diphtheria, in 1948, 14. In 1910 there were 78 deaths from typhoid fever; in 1948, 1. Thirty-eight years ago, we had 59 deaths from scarlet fever; last year, none; 96 deaths from measles, last year, none. In 1910 we had 1,120 deaths from tuberculosis; in 1948, in spite of a local picture which is far from pleasing, we had approximately one-fourth this number of deaths.

In contrast to this improvement in the above areas, in 1910 we had 693 deaths from cancer, and in 1948, 1,505. Our deaths from all forms of heart disease totalled 1,424 in 1910, and almost three times this number in 1948.

It is readily evident that the above figures not only represent improved conditions but also point the way to the additional and changing responsibilities of the health officer and to the interest which he must display in a field which would have been considered foreign to his normal duties at a time when the line of demarcation between preventive and curative medicine was sharply defined. We may well remember the opinions of many not so long ago that the responsibility of the public health worker was purely in the field of prevention, the area of concern of the medical profession and the hospital, curative medicine. The change in this thinking spells progress.

We may well share in the established opinion that disease is no respecter of persons or distances. Our present speed of travel increases the rapidity of the spread of disease from one end of the world to the other. We are familiar with the fact that disease follows the lines of communication, and that waves of illness which may strike California today may reach the Atlantic coast or Honolulu within the space of a few hours. Certainly, therefore, from the point of view of personal and community safety or from a willingness to share in the responsibility for the health of the people of the world, we gladly support the laudable objectives of the World Health Organization. In this spirit of self protection as well as in the willingness to foster the gospel of better health for all, we should be united in the exercise of this principle. It is not in the spirit of presenting a Utopian picture of complete freedom from political interference or claiming the existence of ideal conditions that I express the conviction that, in a national and international sense, the political clouds affecting the public health are lifting. The taxpayer in many areas has been made more conscious of the importance of health with resulting favorable influence on our governing fathers.

Let us, then, be of reasonably good cheer and optimistic about the future. Let us be grateful for a past in which there has been developed, fortunately, a growing consciousness of our responsibility for the care of the underprivileged, and let us look hopefully to the future in charting our journey in the direction of better health. To make our travel more manageable and smoother, we must stimulate growing public opinion to an appreciation not only of the gains which have taken place, but also to the many unsatisfactory conditions which confront many in this country who are not as yet the beneficiaries of the tools of better health, and of the rich opportunities for betterment. There is much to be done which can be done, but we must substitute for the words "It can be done" the positive phrase, "It will be done."

In the hope of better health for tomorrow, no prophetic vision is required to furnish assurance that the present great leaders of this Association, as well as those who will follow, will continue to play a leading part in the promotion of better health for the men, women, and children of America and, we hope, of the world.

In conclusion, I should like to stress that I share with others in the earnest belief that gratitude is an essential

human trait, and in a spirit of heartfelt gratitude I desire in humbleness and humility to express my deep appreciation to all for the great honor of having been privileged to serve as President of this Association during the past year. To be counted among the 12,000 engaged in a field of human endeavor concerned with the improvement of the health of the people is a privilege indeed. To be listed in the future with my distinguished predecessors who have served as titular leaders of this great organization places me under deep obligation to my colleagues who have made this possible.

Longer Years

"A sociological development that has had little public notice, perhaps because it has come about gradually rather than overnight, is the increase in longevity in the United States. There may be general awareness that people are living longer but ignorance of the phenomenal rate of the increase. In the short time between the end of the Second World War and the end of 1948, according to the Metropolitan Life Insurance Company, the average length of life (the expectation of life at birth) of the industrial population of the United States rose about two years, to an all-time high record of 67.16 years. The company's experience with industrial policy holders last year is analyzed in its Statistical Bulletin for last month.

"What seems even more remarkable than the post-war longevity jump of two years, considering the relaxation from the 1941–45 tension and anxiety, is the finding that in less than two decades the improvement has amounted to ten years. Moreover, since 1911–12, when the Metropolitan started its statistical series on the longevity of the industrial population, twenty and a half years have been added to the expectation of life at birth. Noteworthy, too, is the finding that in the last few decades the average length of life among wage-earners and their families has been increasing more rapidly than in the general population. Whereas in 1911–12 the industrial policy holders showed a disadvantage of six and a half years in longevity, by 1948 they had practically reached the level of the population as a whole. This progress may be attributed largely to advances in the medical sciences, to public health measures, and to the rapid rise made in the standard of living as the nation's work has become more equitably distributed.

"Encouraging though these figures are, there is still room for improvement. To use the Statistical Bulletin's own term, 'colored policy holders,' although now relatively high in average length of life, still lag considerably behind white policy holders. The mortality of colored males at age 20 is as high as that of white males at 34; the rate for colored females at age 20 is the same as that for white females at 38.

"Much remains to be done to raise the level of health and longevity among the colored people."

Editorial
New York Times, Sept. 20, 1949

The Health of the American Indians*

FRED T. FOARD, M.D., F.A.P.H.A.

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I SOMETIMES wonder just how many people of the country are familiar with, or interested in health conditions among the American Indians — conditions which have existed throughout the years since the Indians, more than a century ago, were herded into some of the most useless and barren lands of the nation. After only a few months with the Indian Service, I become more and more convinced from month to month that if the people of the country knew more about the health of our Indians as a whole and heard less about the health of Tribes of Indians, there would be a public demand that something constructive be done about the situation. I refer to "Tribes of Indians" with the Navajos and Hopis of New Mexico in mind. For it was among the Navajos that economic, educational, and public health conditions became so intolerable that an aroused public sentiment demanded action. And something is now being done for them. This same pattern of procedure holds true for other tribes of Indians and prevails until conditions become intolerable, when an increase of public interest demands that corrective measures, at least temporarily, be taken. This has been the usual method of dealing with the Indians' public health problems since these people, as a conquered race, were placed on reservations and have since been regarded as wards of the government.

What Is the Present Health Program of the Bureau of Indian Affairs and How Well Is It Operated?

The Bureau of Indian Affairs operates, or attempts to operate, 62 hospitals in the Continental United States and 8 in Alaska. These hospitals vary in bed capacity from as few as 25 beds in the majority of the total, to as many as 337 beds in our largest hospital. Many of them are located in isolated areas far from centers of population. Only a small minority are so situated that consultant medical service is available. In practically all of the smaller hospitals, only one medical officer is on duty, and in addition to his being expected to meet all emergencies he is compelled to serve 24 hours a day, 7 days of the week, and at least 11 months of the year. To staff these 70 hospitals a minimum of 250 physicians are needed on a full-time basis. Funds are provided for 145 and only 83 are now employed. Only one dentist is employed for each 19,000 Indians. Of approximately 860 hospital nursing positions needed to provide proper nursing care, 679 nursing positions are provided for under the 1949 budget limitations, and only 517 nurses are now actually employed for hospital duty.

As for public health (preventive medicine) service for the Indians, 83 field nursing service positions are provided for under budget limitations and only 50 positions are filled. Despite the urgent need for improvements in environmental sanitation on practically all

* Read before the Colorado Public Health Association, Pueblo, Colorado, May 23, 1949.

Indian Reservations, until within the past few months, only one medical officer trained or experienced in public health administration had ever been employed by the Bureau of Indian Affairs for field service. It was only within the past 60 days that the first sanitary inspector was ever employed for field service among the Indians; yet basic sanitation is the one great need for eliminating health hazards which exist on a majority of the Indian Reservations. At the present time, only two qualified sanitary engineers are employed by the Bureau of Indian Affairs and only one of these two is devoting his full time (on the Navajo Reservation) to public health work. No pediatricians or nutritionists have ever been employed for field service among the Indians; yet diseases of infants and children are among the principal causes of the high death rates among Indians as a racial group. In other words there has never been an organized local public health program to serve Indians on an Agency or multiple-Agency basis which would compare favorably with the preventive medicine service furnished by a reasonably efficient full-time county or district health department.

What Are the Results of This Continued Failure To Provide Preventive Medical Service for the American Indians?

Of the 62 Indian hospitals operated in the United States, more than 40 per cent of the hospital load from year to year has been made up of preventable or controllable diseases. On the Navajo Reservation, the proportion runs above 50 per cent. Tuberculosis, pneumonia, diarrhea and enteritis among infants and children, and the venereal infections, all of which are preventable or controllable, are the principal diseases involved in the need for hospital treatment. On the Navajo Reservation, the tuberculosis death rate in 1947 was 302.4 per 100,000 population as compared to 33.4 among the general population of the nation as a whole—a ratio of 9 tuberculosis deaths among Indians to 1 among the general population. The pneumonia death rate among the Navajos for the same year was 189.6 as compared to 38 among the general population—a ratio of 5 to 1. The diarrhea and enteritis death rate among Navajo children in 1947 was 105 as compared to 5.3 among the general population—a ratio of 19.8 deaths among Indians to 1 among whites.

In the State of Montana in 1947, the tuberculosis death rate among all Indians was 244.4 per 100,000 population as compared to 27 for the state as a whole and 33.4 for the nation. The pneumonia death rate among Montana Indians in 1947 was 261.1 per 100,000 as compared to 43.6 for the state and 38 for the nation. Diarrhea and enteritis was responsible for a death rate of 50 per 1,000 among Montana Indian children in 1947, as compared to 3.6 for the state as a whole and 5.3 for the nation.

Statistics on the Navajo Indians located in Arizona and New Mexico, and for all Indians in Montana, have been used to show that there is no appreciable variation in the prevalence of these three preventable diseases because of the difference of climatic conditions in the two areas considered. The problem is an almost total lack of public health facilities for both groups.

The tuberculosis and enteritis problems among the Papagos on the Arizona-Mexican border is as bad as among the Navajos in New Mexico, and the tuberculosis problem among the Indians and natives of Alaska is worse than in either New Mexico or Montana Indians. Trachoma is still quite highly prevalent among some of our Indian tribes. Also typhoid cases among the Reservation Indians of the country as a whole will proportionately outnumber typhoid among the whites by about 4 to 1. Statistics on these two widely separated groups of Indians, one located in the north and the other a thousand miles to the south,

furnish a good general picture of health conditions among all Reservation Indians whether they are residents of Minnesota, or Arizona, or Oklahoma, or Montana, or any other western state.

The high morbidity and mortality rates among the Indians are undisputable evidence that the health of the American Indians, a majority of whom are wards of the government, has been neglected to the extent that the lack of health facilities for Indians is a disgrace to the nation. Our government has spent tens of millions of American dollars to improve health conditions among the people of foreign nations throughout the world, yet stands indicted for conditions such as those existing among the Papago Indians of Southern Arizona, as was recently pointed out by the superintendent of that Indian Agency. I quote from his official report:

> The Papago population curve resembles that of medieval Europe. Of approximately 260 infants born each year, one-fourth die within 12 months; at the age of 6 there are only 160 left; at the age of 18, only 125. The life expectancy of a Papago infant is 17 years, whereas that of a non-Indian infant in the United States is over 60 years. The comparison of the weighted Papago age curve with that of the United States as a whole tells an almost incredible health story. Only a birth rate double that of the country as a whole enables the Papagos to survive at all.

How May We Solve the Indian Health Problem?

The story of the Papagos or the Navajos is the story of a large proportion of all the Reservation Indians of the nation. I believe, therefore, that the Indian health problem must be attacked on a nation-wide basis rather than sporadically, and as a means of meeting emergencies when they arise, as has been the necessary policy of the Bureau of Indian Affairs in the past. I say *necessary* policy, for the Health Division of the Bureau of Indian Affairs has never been given adequate funds by the Congress to inaugurate a public health program for the Indians which will favorably compare with the service provided by full-time county health departments which are now in effect in approximately 1,500 counties in the United States. Full-time public health programs should be organized to serve individual Indian Reservations, or multiple adjacent reservations, in exactly the same manner as county health departments are maintained to provide health services for individual counties, or district health departments are maintained to provide full-time district health service for districts comprised of multiple adjacent counties. I further believe, and I speak for myself and not for the Bureau of Indian Affairs, that the administration of public health programs as carried out on the local or Reservation level should be a responsibility of state and local health authorities, a major portion of the cost being provided from federal funds. Certainly the health conditions of Indians affect health conditions among whites with whom the Indians come in contact, and *vice versa*. There is, therefore, a three-way responsibility—federal, state, and county—and with the supervisory machinery available in all states, there seems to me to be little logic in a federal agency attempting to run local health services, the large majority of which are more than 1,500 miles away from the headquarters administrative office.

Under the present administrative plan of the Bureau of Indian Affairs, it is impossible to formulate a plan of procedure for health services for Indians and expect that it will be carried out on all Indian reservations. There are actually as many potential public health programs for the Indians as there are lay superintendents of Indian Reservations or district directors of Indian Affairs. Under such a policy, a public health program for the Indians can never function as effectively as it would function, if, through a grant-in-aid appropri-

ation to the states, the full responsibility were placed upon state and local health authorities with the federal agency exercising only the authority to see that a previously approved annual plan is carried out. The Indians are entitled to health services equal to those provided for the white people of the country. For lack of funds, inability to pay adequate salaries for professional personnel, and an outmoded central administrative policy, they are not getting it.

Legislative and administrative provision needed for improving the Indian Health Service include:

1. Provision for employing professional personnel without civil service salary restrictions which must now be complied with.
2. Provision for refresher courses for medical personnel in order that they may keep abreast of modern medical and surgical procedure.
3. Provision for professional personnel (physicians and nurses) to attend professional conferences at government expense, including annual conferences of state and national medical and nursing associations.
4. A policy under which qualified civil service professional personnel may hold key administrative positions in the Health Division of the Bureau of Indian Affairs.
5. An alignment of health activities in the Bureau of Indian Affairs to place full responsibility for public health and hospital services under the direction of the Director of Health who would be responsible only to the Commissioner of Indian Affairs or his designated assistant.

Until these basic reforms are made, the Bureau of Indian Affairs will continue to have difficulty in recruiting adequate personnel to meet the health needs of the 400,000 Indians in the United States and Alaska for which the federal government is morally obligated and legally responsible. Unless such provisions are put into effect the public health (preventive disease) program for the Indians should be transferred to the states for administration under grant-in-aid funds allotted to the states and earmarked for full-time local health departments which would serve the Indians on all reservations as well as the white people who reside within the jurisdiction of the respective local health departments.

Sources of Supplementary Materials for Health Instruction

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THE health teacher may call on more organizations for help than any other educator. If the resources of these agencies are used to stimulate and enrich his program, they form an asset of inestimable value; if the materials arriving haphazardly dictate his program, theirs may be a disservice to education.

In 1934, the senior author and Raymond Roop prepared a mimeographed list of agencies and an alphabetic index of the materials that these agencies were in position to supply to health workers. A revision of these lists was published in the May, 1941, issue of the *Research Quarterly*, by Nancy Miner and the senior author. Well over two thousand reprints of these lists have been distributed. Continued demands from the field have prompted the present revision. In preparation for it, many other listings have been studied to discover all eligible agencies. Each of these agencies was asked for information concerning its present-day materials and its consent to be listed. Very large quantities of printed materials were examined, classified, and indexed. Tentative tables in mimeographed form were then circulated to each agency with a request for further corrections. The three tables presented in this paper are the result of these steps.

Although the authors have made every effort to prepare complete lists, there are undoubtedly some important and serious omissions. Such inaccuracies are regretted, and concrete suggestions for their correction are welcomed.

THE THREE TABLES

Table 1 is an alphabetic list of about 150 agencies and groups of agencies here called Sources of Supplementary Material for Health Instruction. Each agency is assigned a reference number which is used in Tables 2 and 3 to designate this agency. Table 2 is an alphabetic list of health subjects. Each subject is followed by the reference numbers of source agencies that have pamphlets or other material on this subject for free or nominal cost distribution. Table 3 classifies these sources by the form of the materials available such as films, posters, exhibits, and models. Under each heading are listed the reference numbers of agencies able to provide this type of material.

HOW TO USE THE TABLES

An example will illustrate the use of these Tables:

The health council of a junior high school in a town of 100,000 population has agreed to give school-wide emphasis in the coming semester to the subject of sex education. Wisely, they have chosen to make this part of a larger subject—"Studies in Human Relationships." Discussion with a group of selected girls has disclosed interest in prenatal care, birth, parenthood, and care of the baby as well as the usual matters of sex instruction. It was decided to reserve discussion of venereal diseases for senior high school, there to be included with problems of public health. Some money is available for

postage, film rentals, and perhaps pamphlets. There are facilities for display of posters and other bulletin board materials.

In the section Child Care and Education in Table 2 are listed 10 different agencies under the 4 subheads: Prenatal Care, The Child from 1 to 6, Infant Care, and Growth Charts. Nine sources under Family Relationships add 8 not already included in the above. The subheads "Of Mother" and "Of Children," under Health, list 12 sources, 4 of which are not duplicates. Another 4 of the 11 sources under Sex Education are new to the list. Since menstruation is a special interest of this age group, this heading contributes 3 more that are not duplicates. Thus, this search has produced 29 different agencies that may serve as sources for the health instruction interests of the group. Inquiry at the local Council of Social Agencies or comparable headquarters of the city's agencies will uncover others. Consultation with city and school librarians may disclose collections of pamphlets as well as books and reading lists.

Now comes the most important step. Teachers and pupils working together distribute among themselves the tasks of visiting or writing the organizations that have been selected from the list. One does not send a mimeographed postal card that says: "Please send all materials that may be used in a health file. I am a Wisconsin teacher. Yours truly, Jane Doe." This is the poorest sort of approach. Instead, each letter is carefully planned. Table 3 now becomes very useful. Agency number 18 which appears seven times under the headings that have been examined is found in Table 3 to distribute pamphlets, exhibits, health plays, and periodicals at cost, and is in position to give advice and counsel. A letter to the American Medical Association would consequently include, first, a careful statement of exactly what the junior high school is hoping to accomplish, how many girls are involved, and how much time is available; second, it would state that a small amount of money is available for pamphlets and rentals, that the school has a sound projector and 2" x 2" slide projection equipment, and that an exhibit (for one week) could be used to advantage; third, the letter would ask what help the school could expect from the A.M.A. and how much the materials would cost. If this is the school's first contact with the A.M.A., the school doctor or other physician should read the letter, or, better still, help construct it. Every letter written by pupils should be signed also by a teacher. Some organizations will send no materials without such a signature. The letter to the A.M.A. will receive the most careful and expert attention. This organization employs three highly trained authorities in health education to render such services and to be available for consultation and talks to school systems and groups of teachers.

Letters should certainly be addressed to the city or county and state health departments and to such federal agencies as 59a, 59c, and 130 which appear in the list of 29 sources culled out of Table 2. Whereas federal agencies distribute to all states equally, state, county, and municipal departments of health usually limit free distribution to their own borders. Source numbers in Table 2 that are followed by the name of a city or state have unusually good materials and do supply other communities. Frequently local and state organizations distribute each other's and federal publications. To avoid costly duplication it is wise to study sample materials before requesting larger quantities.

Letters to numbers 24 and 81 could be more specific. Perhaps as follows:

"In our junior high school we are conducting a health educational program to stress the

general aspects of sex education applicable to girls from 11 to 14. We are especially interested also in prenatal care of the mother and child and in infant care. Have you pamphlet, poster, or film material in these areas that you could place at our disposal? We would be most grateful for any help you could give us to further our program."

To agencies such as 70 and 131 a much more specific letter is in order. This might read:

"In our junior high school we are conducting a program of sex education for three hundred girls. We have heard of your excellent pamphlets on menstruation. Please tell us how we could secure this printed matter for our girls. If you send any sample or demonstration materials for distribution, we can assure you that it will be handled in accord with your wishes. A sound film, charts, or other displays would also be most welcome. any other suggestions you might have for us from your contacts with other schools will be gratefully received."

If a speaker is needed, Table 3 and the local health and medical organizations should be consulted. Usually a personal interview, preceded by a telephone call for an appointment, and followed by a letter repeating the essential details, is the best practice. The speaker is more likely to accept and do a good job if he is asked to speak on a specific subject and if he is informed of the entire program under way. A committee of children is a good inviting group. In chatting with them, the prospective speaker faces a sample of his contemplated audience which can give him a first hand account of what the children want and need to know. The speaker deserves a pleasant and dignified introduction.

Thorough acquaintance with Tables 1, 2, and 3, and a little ingenuity will facilitate the writing of individually adapted letters to each agency. Each letter should give specific information and request some specific help. This may be followed by a general request for other related items. The results from such letters will be surprising. Many agencies engage trained health educators and other experts to answer letters. Often they will furnish additional sources and suggestions for programs. For a well conceived, earnest health education program literally hundreds of pounds of printed matter will be delivered without cost to the school. Obviously this service is expensive and places on the recipient the responsibility to distribute all materials wisely and conscientiously. Many pieces of literature are very costly, even when printed in lots of a hundred thousand, so that the material sent to one school by one organization may cost well over a hundred dollars. A teacher should never request more free copies than he would buy were he in position to pay for them.

Most agencies, with the possible exception of the Government Printing Office, will appreciate a thank-you letter and some remarks concerning the way in which their materials were used. They will also be grateful for constructive suggestions for improving their materials and services.

Many of the sources listed in Table 1 are commercial organizations. They have been listed because in the opinion of the authors their materials may serve the health educator. These companies obviously desire to create intelligent good will for their products. For this reason also their materials are likely to be good. Their small pamphlets are often much more attractive and up-to-the-minute than the larger textbooks which face less criticism and competition. Often, experienced nutritionists and health educators are employed to prepare materials with the counsel of an advisory committee. These deserve our full confidence. If a school system has regulations governing the use of commercial material, these must of course be respected. Beyond this the wise teacher will develop an enlightened attitude toward commercial companies.

This will be broadly friendly rather than everlastingly suspicious. He will assume the responsibility of helping his pupils to live in a world of advertising and to sense when statements of fact begin to shade off almost imperceptibly into pressure for a product. This is training for life. It comes more naturally when the company's name is left on the poster and the hand is not placed over the lens while the silent leader carrying the producer's name runs through the projector.

TABLE 1

An Alphabetic List of Sources of Supplementary Materials for Health Instruction

1. Abbott Laboratories, North Chicago, Ill.
2. Aetna Life Insurance Co., 151 Farmington Ave., Hartford 15, Conn.
3. Allied Youth, Inc., 1709 M St., N.W., Washington 6, D. C.
4. American Assn. for Health, Physical Education, and Recreation, 1201 16th St., N.W., Washington 6, D. C.
5. American Automobile Assn., Pennsylvania Ave. at 17th St., Washington, D. C.
6. American Can Co., 230 Park Ave., New York 17, N. Y.
7. American Cancer Society, 47 Beaver St., New York 4, N. Y.
8. American Committee on Maternal Welfare, Inc., 24 West Ohio St., Chicago 10, Ill.
9. American Dental Assn., 222 E. Superior St., Chicago 11, Ill.
10. American Diabetic Assn., 1 Nevins St., Brooklyn 17, N. Y.
11. American Dietetic Assn., 620 N. Michigan Ave., Chicago 11, Ill.
12. American Foundation for the Blind, 15 West 16th St., New York 11, N. Y.
13. American Genetic Assn., 1507 M St., N.W., Washington 5, D. C.
14. American Hearing Society, 817 14th St., N.W., Washington 5, D. C.
15. American Heart Assn., Inc., 1775 Broadway, New York 19, N. Y.
16. American Institute of Baking-Nutrition Education Dept., 1135 W. Fullerton Ave., Chicago 14, Ill.
17. American Institute of Family Relations, 5287 Sunset Blvd., Los Angeles 27, Calif.
18. American Medical Assn., 535 N. Dearborn St., Chicago 10, Ill.
19. American Museum of Natural History, Central Park West at 79th St., New York 24, N. Y.
20. American National Red Cross, 529 S. Wabash Ave., Chicago, Ill., or 17th and D St., N.W., Washington, D. C.
21. American Occupational Therapy Assn., 33 W. 42nd St., New York 18, N. Y.
22. American Optometric Association, Jenkins Bldg., Pittsburgh 22, Pa.
23. American Physical Therapy Association, 1790 Broadway, New York 19, N. Y.
24. American Public Health Assn., 1790 Broadway, New York 19, N. Y.
25. American Social Hygiene Assn., 1790 Broadway, New York 19, N. Y.
26. Association Films (YMCA Motion Picture Bureau), 347 Madison Ave., New York 17, N. Y.
    Also: 206 S. Michigan Ave., Chicago 4, Ill.
    351 Turk St., San Francisco 2, Calif.
    3012 Maple Ave., Dallas 4, Tex.
27. Association for Family Living, 28 E. Jackson Blvd., Chicago 4, Ill.
28. Association of American Soap and Glycerine Producers, Inc., 295 Madison Ave., New York 17, N. Y.
29. Bell and Howell Co., 7100 McCormick Rd., Chicago 45, Ill.
30. Better Vision Institute, Inc., Suite 3157, 630 Fifth Ave., New York 20, N. Y.
31. Bicycle Institute of America, Inc., 122 East 42nd St., New York, N. Y.
32. Bike Web Mfg. Co., 41 W. 25th St., Chicago, Ill.
33. Birthright, Inc., 134 Nassau St., Princeton, N. J.
34. Borden Co., 350 Madison Ave., New York 17, N. Y.
35. Bristol-Myers Co., Educational Service Dept., 630 Fifth Ave., New York 20, N. Y.
36. California Fruit Growers Exchange-Educational Division, Box 5030 Metropolitan Station, Los Angeles, Calif.
37. California State Auto Assn., Sacramento, Calif.
38. Carnation Co., Oconomowoc, Wis.
39. Cereal Institute, Inc., 135 S. LaSalle St., Chicago 3, Ill.
40. Chicago Heart Assn., Inc., Suite 1608, 203 N. Wabash Ave., Chicago 1, Ill.
41. Child Study Assn. of America, 221 W. 57th St., New York, N. Y.
42. Child Welfare League of America, Inc., 130 East 22nd St., New York 10, N. Y.

TABLE 1 (Cont.)

43. Church & Dwight Co., Inc., 70 Pine Street, New York 5, N. Y.
44. City of Chicago Municipal T.B. Sanitarium, 2049 Washington Blvd., Chicago, Ill.
45. Cleanliness Institute, 295 Madison Ave., New York 17, N. Y.
46. Cleveland Health Museum, 3911 Euclid Ave., Cleveland 6, Ohio
47. Commonwealth Fund, 41 E. 57th St., New York 22, N. Y.
48. Community Chest (Local)
49. Community Service Society, 105 E. 22nd St., New York 10, N. Y.
50. Cream of Wheat Corporation, Minneapolis 13, Minn.
51. Denoyer-Geppert Co., 5235–59 Ravenswood Ave., Chicago 40, Ill.
52. Dental Societies (State)
53. Eastman Kodak Co., Rochester 4, N. Y.
54. Educational Department (State)
55. Encyclopedia Britannica Films, Inc., Wilmette, Ill.
56. Eugenics Society of Northern California, Capital Nat. Bank Bldg., Sacramento, Calif.
57. Evaporated Milk Assn., 307 N. Michigan Ave., Chicago 1, Ill.
58. Federal Council of the Churches of Christ in America, 297 Fourth Ave., New York 10, N. Y.
59. Federal Security Agency, Washington 25, D. C.
    a. Children's Bureau
    b. Office of Education
    c. Public Health Service
60. Florida Citrus Commission, Lakeland, Fla.
61. General Mills, Inc., Minneapolis, Minn.
62. Good Teeth Council for Children, 17th floor, Wrigley Bldg., 400 N. Michigan Ave., Chicago 11, Ill.
63. Health Institute of the U.A.W.-C.I.O., 1930 E. Jefferson St., Detroit 14, Mich.
64. Health Departments (City)
65. Health Departments (State)
65. A. Household Finance Corporation, 919 N. Michigan Ave., Chicago 11, Ill.
66. Illinois Dept. of Public Health, Springfield, Ill.
67. Illinois Society for Mental Hygiene, 343 South Dearborn St., Chicago 4, Ill.
68. Illinois Society for the Prevention of Blindness, 203 N. Wabash Ave., Chicago, Ill.
69. Illinois State Medical Society-Educational Committee, 30 North Michigan Ave., Chicago 2, Ill.
70. International Cellucotton Products Co., 919 N. Michigan Ave., Chicago 11, Ill.
71. International Film Bureau, Inc., 84 E. Randolph, Chicago, Ill.
72. Interstate Narcotic Assn., P. O. Box 1725, Paterson, N. J.
73. Iowa Child Welfare Research Station, State Univ. of Iowa, Iowa City, Ia.
74. Iowa State College, Ames, Ia.
    a. Extension Service
    b. Visual Instruction Service
75. John Hancock Life Insurance Co., Boston, Mass.
76. Kansas State Policy-Making Committee on Health Education, Kansas City, Kan.
77. Ladies Home Journal, The Curtis Publishing Co., Philadelphia 5, Pa.
78. Lever Brothers Company, 50 Memorial Dr., Cambridge 39, Mass.
79. Medical Societies (Local)
80. Medical Societies (State)
81. Metropolitan Life Insurance Co., 1 Madison Ave., New York 10, N. Y.
82. Milk Industry Foundation, Chrysler Bldg., New York 17, N. Y.
83. Narcise F. Thiberge, M.D., 846 Audubon Bldg., New Orleans 16, La.
84. National Assn. to Control Epilepsy, 22 E. 67th St., New York 21, N. Y.
85. National Better Business Bureau, Inc., Chrysler Bldg., 405 Lexington Ave., New York 17, N. Y.
86. National Biscuit Company, 449 W. 14th St., New York 14, N. Y.
87. National Board of Fire Underwriters, 85 John St., New York 7, N. Y.
88. National Canners Assn., Home Economics Division, 1739 H St., N.W., Washington, D. C.
89. National Child Welfare Assn., 70 Fifth Ave., New York, N. Y.
90. National Committee for Mental Hygiene, Inc., 1790 Broadway, New York 19, N. Y.
91. National Congress of Parents and Teachers, 600 S. Michigan Blvd., Chicago 5, Ill.
92. Accident Prevention Dept., Division of Assn. of Casualty & Surety Executives, 60 John St., New York, N. Y.

TABLE 1 (Cont.)

93. National Dairy Council, 111 North Canal St., Chicago 6, Ill.
94. National Dental Hygiene Assn., 934 Shoreham Bldg., Washington, D. C.
95. National Education Assn., 1201 16th St., N.W., Washington 6, D. C.
96. National Fire Protection Assn., 60 Batterymarch St., Boston 10, Mass.
97. National Foot Health Council, The Phoenix Bldg., Rockland, Mass.
98. National Forum, Inc., 407 S. Dearborn St., Chicago 5, Ill.
99. National Foundation for Infantile Paralysis, Inc., 120 Broadway, New York 5, N. Y.
100. National Health Council, 1790 Broadway, New York 19, N. Y.
101. National Live Stock and Meat Board, Dept. of Nutrition, 407 S. Dearborn, Room 825, Chicago, Ill.
102. National Organization for Public Health Nursing, 1790 Broadway, New York 19, N. Y.
103. National Recreation Assn., 315 Fourth Ave., New York 10, N. Y.
104. National Safety Council, 20 N. Wacker Drive, Chicago 6, Ill.
105. National Society for Crippled Children and Adults, Inc., 11 S. LaSalle St., Chicago 3, Ill.
105. A. National Society for Medical Research, 25 E. Washington St., Chicago 2, Ill.
106. National Society for the Prevention of Blindness, Inc., 1790 Broadway, New York 19, N. Y.
107. National Woman's Christian Temperance Union, 1730 Chicago Ave., Evanston, Ill.
108. National Tuberculosis Assn., 1790 Broadway, New York 19, N. Y.
109. NEA Service, 1200 W. Third St., Cleveland 13, Ohio
110. New York Committee on Mental Hygiene, 105 E. 22nd St., New York 10, N. Y.
111. New York University, Washington Square, New York 3, N. Y.
112. North Carolina Social Hygiene Society, Inc., N. Dawson St., Raleigh, N. C.
113. Nystrom, A. J. and Co., 3333 Elston Ave., Chicago 18, Ill.
114. Office of Public Instruction, State of Illinois, Vernon L. Nickell, Supt., Springfield, Ill.
115. Pepsodent—Division of Lever Brothers Co., 141 West Jackson Blvd., Chicago 4, Ill.
116. Philadelphia Child Health Society, 311 So. Juniper St., Philadelphia 7, Pa.
117. Planned Parenthood Assn., Chicago Area, 203 N. Wabash Ave., Chicago 1, Ill.
Planned Parenthood League of Ill., 203 N. Wabash Ave., Chicago 1, Ill.
118. Planned Parenthood Federation of America, Inc., 501 Madison Ave., New York 22, N. Y.
118. A. Procter and Gamble, Cincinnati, Ohio
119. Prophylactic Brush Co., Florence, Mass.
120. Public Affairs Committee, Inc., 22 E. 38th St., New York 16, N. Y.
121. Public Health Committee of the Paper Cup and Container Institute, 1790 Broadway, New York 19, N. Y.
122. Quaker Oats Company, 141 W. Jackson Blvd., Chicago 4, Ill.
123. Quarterly Journal of Studies on Alcohol, 52 Hillhouse Ave., Yale Station, New Haven, Conn.
124. Ralston Purina Company, Checkerboard Square, St. Louis 2, Mo.
125. Society for Visual Education, Inc., 100 E. Ohio St., Chicago 11, Ill.
126. State Charities Aid Assn., 105 E. 22nd St., New York 10, N. Y.
127. State Congress of Parents and Teachers
128. State Dept. of Public Instruction, Madison, Wis.
129. State Universities, Extension Service
130. Superintendent of Documents, Government Printing Office, Washington 25, D. C.
131. Tampax, Inc., 155 East 44th St., New York 17, N. Y.
132. Teaching Films Custodian, Inc., 25 West 43rd St., New York 18, N. Y.
133. Tuberculosis Societies (Local)
134. Tuberculosis Societies (County)
135. Tuberculosis Societies (State)
136. Travelers Insurance Co., Hartford 15, Conn.
137. U. S. Dept. of Agriculture, Washington 25, D. C.
138. University of Illinois, College of Agriculture, Champaign, Ill.
139. United Fruit Co., Education Dept., Pier 3 North River, New York 6, N. Y.
140. VD Education Institute, N. Dawson St., Raleigh, N. C.
141. Wheat Flour Institute, 309 W. Jackson Blvd., Chicago 6, Ill.
142. Women's Home Companion, 250 Park Ave., New York 17, N. Y.
143. World League Against Alcoholism, Westerville, Ohio
144. Wyeth, Inc., 1600 Arch St., Philadelphia 3, Pa.
145. Young Women's Christian Association, 600 Lexington Ave., New York 22, N. Y.

TABLE 2

Sources of Supplementary Materials for Health Instruction Classified by Subject Matter

(Numbers refer to the agencies listed in Table 1)

Adenoids—81, 130
Alcohol and Other Narcotics—3, 18, 59c, 72, 98, 107, 110, 113, 120, 123, 125, 130, 143
Amoebic Dysentery—65(Ill.), 130
Animal Experimentation—18, 65(Ill.), 66, 105A
Appendicitis—2, 59c, 66, 75, 81, 130
Arthritis—18, 59c, 66, 105, 130
Asthma—59c, 66, 130
Bacteria—26, 65(Ill.), 66, 81
Birth Control—33, 58, 117, 118, 130
Blindness—12, 18, 66, 105, 120, 130
Blood Pressure—15, 18, 40, 59c, 66, 130
Bubonic Plague—59c
Cancer—2, 7, 9, 18, 26, 47, 59c, 66, 81, 120, 130
Cardiac (See Heart)
Cerebral Palsey—21, 47, 59c, 105, 130
Charm—21, 27, 77, 142
Chicken Pox—59c, 65(Calif.), 66, 81, 130
Child Care and Education—18, 26, 27, 41, 42, 43, 59a, 66, 67, 71, 73, 74a, 75, 77, 81, 89, 110, 116, 125, 126, 130, 142
  From 1 to 6—18 24, 41, 49, 66
  Comics—41
  Emotional Development—24, 27, 41, 66, 110
  Good Habits—27, 41, 66, 81
  Growth Charts—1, 109
  Infant Care—18, 24, 27, 59a, 66, 81
  Prenatal Care—18, 24, 59a, 66, 81
  Safety and Health of School Child—24, 66, 81, 104, 127
  Sex Education—18, 27, 41, 66, 110, 126, 140, 142
  Social Attitudes—41
Cleanliness—19, 26, 28, 35, 45, 59c, 65(Ill.), 66, 78, 118A, 125
Colds—2, 59c, 66, 75, 81, 130
Communicable Diseases—18, 59c, 65(Ill.), 66, 75, 114, 121, 130
Cosmetics—18, 59c, 85
Courtship—27, 58, 125
Crippled (See Handicapped)
Deafness (See Hearing)
Dental Hygiene—9, 18, 19, 26, 35, 43, 52, 59a, 62, 66, 94, 115, 125
Diabetes—2, 10, 18, 49, 66, 75, 81
Diet (See Food and Nutrition)
Diphtheria—2, 18, 59c, 65(Calif.), 66, 81, 127, 130
Driver Education—5, 26, 37, 92, 95, 104, 111, 125
Dysmenorrhea—4, 59c
Ears (See Hearing)
Endocrines—18, 19, 66
Environment—66, 81, 106, 125, 128
  Ventilation—24, 66, 128
  Lighting—66, 106, 128
Epilepsy—18, 59c, 81, 84, 105, 110, 120, 130
Eugenics—13, 33, 56, 118
Exercise and Endurance—2, 4, 18, 24, 26, 35, 81, 125, 130
Eyes—2, 18, 22, 30, 59c, 66, 68, 71, 75, 81, 105, 106, 125, 130
  Care of Eyes—2, 18, 19, 26, 30, 55, 68, 81, 106, 113
  Diet and Eye Health—106
  Eyes in Children—18, 22, 30, 63, 106, 128
  Facts and Fallacies Concerning Crossed Eyes—68, 106
  Home Treatments for Eyes—106
  Lighting in Schoolrooms—66, 106, 128
  Ophthalmia Neonatorum—66, 68, 106
  Prevention of Blindness—66, 68, 106
  Why Wear Glasses—18, 30, 106
Family Relationships—17, 25, 26, 27, 58, 71, 118, 125, 126
Feet—26, 32, 55, 59c, 66, 81, 97, 130, 138
First Aid—2, 18, 19, 20, 26, 32, 55, 75, 81, 111, 113, 125, 130, 138
Fluorine—9, 66, 94, 130
Food and Nurtition—6, 11, 16, 18, 20, 24, 26, 39, 49, 55, 57, 59a, 59c, 61, 65(Ill.), 66, 71, 74a, 81, 86, 93, 101, 114, 120, 122, 124, 125, 130, 138, 139, 141
  Athletes Training Diets—36
  Charts of Food Values—16, 18, 19, 20, 50, 57, 66, 101, 116, 128, 137, 138
  Diets—11, 18, 24, 26, 50, 55, 57, 59a, 66, 75, 93, 101, 116, 124, 138
  Family Food Supplies—20, 39, 57, 65A, 66, 81, 88, 137, 141
  Home Pasteurization of Milk—65(Ill.), 66
  In Relation to Teeth—65(Ill.), 66, 93, 116, 125
  Ice Cream—26, 34, 93
  Institutional Planning—11, 24, 26
  Milk—2, 11, 18, 19, 24, 26, 38, 47, 55, 57, 66, 81, 82, 93
  Planning Meals—2, 20, 26, 39, 57, 66, 130
  Teaching Aids—16, 39, 57, 61, 66, 124, 125
  School Lunches—11, 18, 20, 24, 57, 66, 128
  Vitamins—11, 18, 24, 26, 36, 50, 57, 59c, 60, 66, 74a, 81, 85, 88, 101, 113, 116, 120, 122, 137
Flies—18, 19, 26, 65(Calif.), 66
Genetics (See Eugenics)
Goitre—18, 59c, 81
Gonorrhea—18, 24, 25, 59c, 66, 81, 112, 126, 130, 140
Grooming—27, 28, 35, 45, 98, 118A, 138
Handicapped—26, 47, 59a, 99, 105
  Rehabilitation—4, 26, 92, 105
Hay Fever—59c, 66, 81, 83

TABLE 2 (Cont.)

Headaches—75
Health—20, 59b, 59c, 66, 67, 100, 125, 126, 138
  After Forty—18, 57, 66, 75, 81, 126
  Conservation in Middle Age—49, 66, 75, 81
  Economics and Insurance—47, 65A, 120
  Family Health—20, 49, 65A, 66, 69, 120
  In Industry—63, 66
  National—19, 120
  Of Mother—8, 18, 20, 24, 47, 66
  Of Teacher—31, 66, 128
  Of Children—18, 20, 47, 57, 59a, 66
  Through the Ages—66, 91
Health Education—18, 24, 25, 26, 28, 43, 46, 49, 54, 57, 59c, 61, 66, 67, 85, 100, 103, 112, 127, 129, 133, 141
  Biological and Scientific Materials—24, 51, 144
  Community Programs—25, 47, 59a, 66, 81, 102
  Bulletins—65(Calif.), 81
  Dental—9, 66, 76, 128
  General Information on All Subjects—18, 24, 64, 65, 79, 80
  Health Heroes—24, 26, 74a, 81
  Hints—18, 65(Ill.)
  Measurements—95
  Methods—18, 24, 59c, 66
  National—4
  Outlines for Home Study—102, 107
  Programs in Schools—4, 7, 20, 47, 49, 54, 57, 59b, 66, 73, 78, 81, 91, 107, 110, 114, 126, 127, 128, 130
  Radio Scripts—18, 59b, 66, 111
  Rural Programs—47, 66, 69, 137
  Standards—95
  Talks—59c, 66, 79
  Teaching Plans—18, 54, 81, 124
Hearing—14, 18, 55, 59a, 66, 81, 125
  Hard of Hearing—14, 18, 26
  Helps—14
  School and Hearing—14, 128
  Swimming and the Ears—14
Heart—15, 18, 26, 40, 49, 59c, 66, 71, 130
  Care of Troubled Hearts—15, 40
  Cause of Heart Ailments—15, 59a, 66
  Diseases of Heart and Blood Vessels—15, 18, 40, 81
  Facts and Fallacies—40
  Prevention of Heart Diseases in Childhood—15, 40
Height-Weight Tables—18, 24, 66, 81, 130
Heredity—13, 26, 33, 71
Home Care of the Sick—20, 55, 59c, 75, 103, 109
Hookworm Disease—59c, 81
Human Relations (See Social Hygiene)
Infantile Paralysis—2, 18, 47, 59c, 65(Calif.), 66, 74a, 99, 130
Influenza—2, 59c, 66, 81
Information on All Questions—4, 18, 59c, 64, 65, 66, 79, 80, 81
Kidney Troubles—2, 59c, 66
Laws—47, 59a, 66, 126, 130
  Insane, Feeblemindedness, Epileptics, Child Welfare, Quarantine, Burials, Etc.
Lockjaw—59c, 65(Ill.), 130
Malaria and Mosquitoes—59c, 66, 81, 130
Marihuana—18, 130
Masturbation—18, 27
Measles—2, 18, 59c, 66, 81, 130
Medical Heroes (See Health Education)
Menopause—18, 27, 59c, 66
Menstruation—18, 59c, 66, 70, 131
Mental Hygiene—17, 18, 24, 27, 47, 59a, 67, 90, 108, 110, 120, 126
Mumps—65(Calif.), 66, 81, 130
Narcotics—3, 18, 72, 123
Nutrition (See Food and Nutrition)
Obesity—18, 81, 124
Occupational Diseases—24, 66, 130
Occupational Therapy—21, 125
Oral Hygiene (See Dental Hygiene)
Personality Development—17, 47, 67, 98 (See Charm, Grooming, Emotional Development, Sex Education)
Physical and Medical Examinations—49, 59c, 114, 128, 130
Physical Defects—24
Pneumonia—2, 18, 24, 47, 55, 59c, 65(Ill.), 66, 75, 81, 130
Posture—2, 26, 49, 59a, 59b, 66, 81, 113, 125, 130, 138
Public Health—20, 24, 25, 26, 47, 55, 66, 102, 126, 130
Quacks, Patent Drugs, Fads—18, 130
Rabies—18, 59c, 65 (Calif., Ill.), 66, 81, 130, 138
Rats—66, 130
Recreation and Play—20, 26, 27, 59a, 59b, 77, 103, 105, 125, 145
Rest, Sleep and Relaxation—24, 27, 75, 81
Respiratory Diseases—2, 66, 81, 130
Rheumatic Fever—15, 40, 47, 59a, 59c, 66, 81, 105, 120, 130
Rheumatism—18, 59c, 66, 81
Safety—19, 26, 59c, 103, 104, 105, 111, 113, 132
  Automobile—2, 5, 19, 26, 37, 81, 92, 95, 104, 107, 111, 130, 132, 136
  Bicycling—2, 5, 31, 92, 104, 125
  Education—20, 37, 66, 92, 102, 104, 111, 125
  Fire—2, 19, 20, 81, 87, 92, 96, 104, 111, 125
  Home—2, 20, 55, 75, 81, 92, 104, 111, 113, 125, 132
  In Industry—26, 63, 81, 92, 104, 111
  On the Water—2, 19, 20, 26, 59c, 81, 92, 104, 113
  Pedestrian—2, 5, 19, 37, 81, 92, 104, 111, 125, 132
  School—5, 20, 81, 92, 95, 102, 104, 111, 125, 128

TABLE 2 (Cont.)

Vacations—2, 19, 81, 92, 104, 111
Sanitation—18, 24, 65(Calif., Ill.), 66, 128, 130, 142
Scarlet Fever—2, 18, 65(Calif., Ill.), 66, 81, 130
School Custodian Duties—81, 128
Sex Education—4, 17, 18, 24, 25, 27, 66, 112, 126, 130, 140
Sickness Costs—81 (See Economics and Insurance under Health)
Skin
Poisonous Plants—2
Troubles—59c, 66, 130
Smallpox—18, 59c, 65(Calif., Ill.), 66, 130
Vaccination—18, 59c, 66
Social Hygiene (See Family Relationships, Gonorrhea, Sex Education, Syphilis, Venereal Diseases, Etc.)
Social Work—47, 58, 125
Spastics—105
Speech Defects—18, 105
Sun Bathing—20, 59c, 65(Ill.), 130
Statistics—18, 59a, 65(Ill.), 66, 130
Mortality, Morbidity, Birth
Syphilis—24, 25, 26, 49, 59c, 64, 65, 66, 112, 126, 130, 140
Teeth—2, 9, 18, 19, 26, 35, 52, 55, 59c, 61, 62, 66, 75, 81, 94, 115, 125, 128, 130, 138
Care of Teeth—2, 9, 18, 26, 43, 66, 115
Diet and Teeth—9, 18, 57, 66, 76
Fluorine—9, 66, 94
Healthy Teeth—2, 9, 18, 62, 66, 76, 81, 94, 119, 130
Oral Hygiene—9, 18, 66, 76, 94, 115
Prevention of Decay—9, 66, 76, 94, 128, 130
Tetanus—65(Ill.), 66, 130
Tobacco—18, 107
Facts on Smoking—18
Tonsils—81, 130
Tuberculosis—18, 24, 44, 47, 49, 55, 59c, 66, 74a, 75, 81, 108, 126, 128, 130, 133, 134, 135
Causes, Prevention and Control—18, 66, 108
Collapse Therapy—18, 44, 108
Facts and Talking Points—2, 18, 44, 108
Public Health Nursing—49, 102, 108
Tularemia—65(Ill.), 66
Typhoid Fever—2, 18, 59c, 66, 130
Underweight—18, 81
Undulant Fever—65(Ill.), 66, 130
Vaccination and Smallpox—66, 81
Venereal Diseases—18, 24, 25, 59c, 63, 66, 75, 112, 126, 130, 140
Vision (See Eyes)
Vitamins (See Food and Nutrition)
Water—66, 130
Weight Control—65(Ill.), 101, 124, 130
Whooping Cough—18, 66, 81, 130
X-Rays and You—26, 53
Yellow Fever—2, 18, 19, 130

TABLE 3

Sources of Supplementary Materials for Health Instruction Classified by Form of Material

(Numbers refer to agencies listed in Table 1)

PAMPHLETS AND LEAFLETS

Most of the agencies listed have some kind of leaflet materials for distribution; a great deal of it is free. Those *charging* a small fee are:

4, 7, 8, 9, 11, 12, 13, 14, 15, 17, 18, 20, 21, 24, 25, 27, 33, 41, 42, 46, 47, 49, 59a, 59b, 59c, 66, 67, 73, 77, 83, 84, 85, 90, 91, 95, 96, 99, 100, 102, 103, 104, 105, 106, 107, 108, 110, 111, 112, 114, 116, 118, 120, 125, 126, 127, 128, 130, 137, 138, 140, 142.

FILMS AND SLIDES

Usually obtainable from state public health departments and state universities. May also be secured from the following (the name of the agency will usually indicate nature of the material; F-Free R-Rental, S-Sell):

2-F, 5-F, 7-RS, 8-R, 9-R, 14-R, 15-R, 19-RS, 20-F, 25-RS, 26-R, 40-F, 46-F, 51-S, 55-RS, 57-F, 59c-F, 70-F, 71-R, 74a-RS, 81-F, 82-R, 84-S, 86-R, 87-F, 93-F, 97-R, 99-F, 101-R, 104-R, 105-F, 106-F, 107-RS, 120-S, 125-RS, 132-R, 137-R, 140-R, 144-R.

POSTERS

Most commercial agencies distribute displays or posters free of charge. The following agencies also give, loan, or sell posters:

5, 7, 14, 20, 25, 31, 40, 51, 57, 59c, 63, 67, 87, 93, 96, 97, 99, 101, 102, 104, 106, 107, 112, 115, 116, 124, 140.

TABLE 3 (Cont.)

EXHIBITS

5, 7, 14, 18, 20, 21, 46, 81, 93, 99, 105, 106, 107, 118.

MODELS

9, 15, 41, 51, 119.

SPEAKERS OR CONSULTANTS

Usually from local public health departments, medical societies, hospitals, universities, etc., also from the following agencies:

5, 7, 9, 14, 18, 21, 27, 46, 63, 67, 81, 99, 102, 104, 107, 131, 137, 141.

HEALTH PLAYS, SONGS, DRILLS, STORIES, GAMES

18, 57, 59b, 87, 93, 103, 107.

CHARTS

1, 9, 13, 15, 16, 20, 34, 35, 39, 43, 50, 51, 57, 61, 66, 67, 70, 78, 93, 101, 106, 107, 109, 116, 131, 137,.

PERIODICALS

3, 8, 10, 12, 14, 18, 20, 21, 23, 24, 25, 28, 36, 40, 41, 46, 56, 63, 66, 67, 69, 72, 80, 81, 82, 84, 91, 93, 95, 102, 103, 104, 105, 107, 112, 115, 118, 123, 128, 143.

BIBLIOGRAPHIES OF HEALTH EDUCATION MATERIALS

3, 5, 20, 24, 25, 33, 53, 54, 59b, 59c, 66, 67, 93, 100, 102, 105, 106, 107, 111, 132, 140.

Dr. Mustard in a New Position

Harry S. Mustard, M.D., has resigned as Commissioner of Health of New York City to take effect at the end of 1949. At that time he will become Executive Director of the New York State Charities Aid Association. This is a state-wide health and welfare agency with a 77 year history of activities to improve health, welfare, and mental hygiene throughout the state. The New York State Tuberculosis and Health Committee, operating throughout the state except in New York City, is one of its chief arms.

For the past two years while serving as Health Commissioner, Dr. Mustard has been on leave of absence as director of the Columbia University School of Public Health. He will retain his connection with the School as Professor of Public Health Practice, but will not return in an administrative capacity.

During Dr. Mustard's Commissionership, he has reorganized the New York City Department of Health, pulling together related activities so that the performance of services could be accelerated. Services at the various health centers have been expanded in line with the principle of putting public health on a neighborhood basis, maternal and child health services have been strengthened, a premature baby ambulance service started, and a diagnostic service begun.

During 1947, Dr. Mustard was President of the American Public Health Association, of which he is a Fellow.

Changing Concepts of Basic Local Public Health Services

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A FORTUITOUS combination of scientific progress, high-level income, and public enlightenment has given rise to a great upsurge of popular interest in personal and community health. This has resulted in a demand not merely to retain the advances already made, but to achieve further progress in human health. For the more seasoned workers in health fields, long accustomed to public apathy and meager budgetary support, this is a new and rather strange experience. To some extent we have been caught unaware of a trend already in effect, but, as I will show, not as badly as some have been led to believe. Many of the newer concepts of basic public health services are already reflected in the present functions and organization of health departments. Since your main interest—and mine, for that matter—is expressed in the day-to-day health needs of people and the means immediately at hand for satisfying those needs, I will direct my observations and remarks to the local scene—more particularly, to the local health department and its place in the changing order.

Although I may seem to be taking liberties with the title assigned to this address, let me say in justification that any discussion of changes in the ideas of what basic health services are and what they should be must begin with the organization which may accommodate those changes. Professional health workers cannot, it seems to me, talk about advancing concepts and unexplored fields of public health in a vacuum. I should like, therefore, to begin this discussion with a brief review of the current status of health organizations, including staffs and budgets.

LOCAL HEALTH ORGANIZATIONS

The nation's greatest and most insistent need in the field of public health is still to strengthen existing local health departments and local health services, and to extend professionally directed public health services to areas now lacking such protection. But when viewed in perspective, the current picture of local health organization and services is not at all disheartening; there is, in fact, cause for considerable satisfaction. At long last it would appear, the public is recognizing that there can be only limited application of existing scientific knowledge concerning the prevention of disease and of new developments in public health until all areas of this country are covered by local public health units properly staffed and financed. What is often overlooked, however—and it is right that it should not be overstressed—is the fact that advances have been and are being made. Actually, the strides made in local health organizations and in the enrichment of the local health program in the last dozen years have been surprising.

There were, for instance, in this country in 1948, 1,266 public health departments, which provided some measure of local health services for 1,668 counties and 281 separate cities (Table 1). Except for vacancies, all these were un-

TABLE 1

Number of Full-time Health Departments Rendering Local Health Service, Number of Counties Included, and Population Represented, by Class of Health Department Organization, June 30, 1948

Class of health department organization	Number of full-time health departments *	Number of counties included *	Population represented *
Total health departments rendering local health service ‡	1,266	1,668	106,297,984
Local health departments	1,195	1,312	95,615,715
Single county (including city-county)	(653)	(653)	(38,204,536)
Local health district	(261)	(659)	(12,254,450)
City	(281)	(–)	(45,156,729)
State health districts rendering direct local service ‡	71 **	356	10,682,269

* Based on the Directory of Full-time Local Health Officers. Suppl. 194 (1948 Revision). *Pub. Health Rep.*
† Local estimate, as of June 30, 1947.
‡ In addition, there are 53 state health districts, including 290 counties having a population of 8,654,224, organized primarily for supervisory and advisory service.
** Ten of these districts cover parts of counties only; therefore, no entry is made for them in the column "Number of counties included."

der the direction of health officers employed on a full-time basis. Thus, organized local health service was rendered to about 106 million people, or roughly three-fourths of the total population of the country. Omitting city health departments, this may be contrasted with the 556 total health departments of similar definition, representing 751 counties, which offered local health services in 1935 (Table 2). The increase is a significant one—a 77 per cent rise in the number of total health organizations and a 122 per cent jump in the number of counties covered.

The most noteworthy advances have been made in the development of local health districts. A dozen years ago,

TABLE 2

Progress Between the Years 1935 and 1948 of Full-time Health Departments, Exclusive of City Health Departments, Rendering Local Health Service, and Counties Included, by Class of Health Department Organization*

Class of Health Department Organization	Departments: Number Dec. 31, 1935 †	Departments: Number June 30, 1948 ‡	Departments: 12 year increase Number	Departments: 12 year increase Per cent	Counties included: Number Dec. 31, 1935 †	Counties included: Number June 30, 1948 ‡	Counties included: 12 year increase Number	Counties included: 12 year increase Per cent
Total health departments rendering local health service **	556	985	429	77.2	751	1,668	917	122.1
Local health departments	527	914	387	73.4	610	1,312	702	115.1
Single county (including city-county)	(486)	(653)	(167)	34.4	(486)	(653)	(167)	34.4
Local health district	(41)	(261)	(220)	536.6	(124)	(659)	(535)	431.4
State health districts rendering direct local service **	29	71 ¶	42	144.8	141	356	215	152.5

* 1935 information not available for city health departments. There were 281 city units operating as of June 30, 1948.
† Mountin, Joseph W., Hankla, Emily K., and Druzina, Georgie B.: Ten Years of Federal Grants-in-Aid for Public Health, 1936–1946. *Pub. Health Bull.* No. 300.
‡ Based on the Directory of Full-time Local Health Officers. Suppl. 194 (1948 Revision). *Pub. Health Rep.*
** In addition, there were the following numbers of state health districts organized primarily for supervisory and advisory service: December 31, 1935—5 districts, including 11 counties; June 30, 1948—53 districts, including 290 counties.
¶ Ten of these districts cover parts of counties only; therefore, no entry is made for them under "Counties included, June 30, 1948."

when the concept of local health districts was just gaining broad recognition, the bulk of local health organizations consisted of single county or city units. There were less than 50 health districts in 1935; in 1948, there were 261 such health districts, covering 659 counties, which represented an increase of 537 per cent in number of organizations and 431 per cent in counties included (Table 2). The present trend toward local health district organizations is an encouraging one; it shows that, despite obstacles that were once considered insurmountable, contiguous communities can, by combining their staff and consolidating funds and facilities, offer their citizens at least some measure of modern health protection.

While great strides have been made in the development of local health units, the problem of staffing is still a serious one. Less than 5 per cent of the nation's total population is at present covered by local health organizations which fully meet the minimum staffing standard recommended by public health authorities as necessary to provide basic public health services (Table 3). On the other hand, over 40 million people, representing about 29 per cent of the total population, are served by local health units which meet the minimum standard with respect to public health physicians, and, according to these standards, over 77 million people—about 56 per cent of the population—reside in local areas having the prescribed number of sanitarians (Table 3).

The health officer vacancies highlight the general shortage of personnel and make the situation relatively more acute. In 1948, 23 per cent of the local health organizations were either without health officers or were temporarily served by the health officers of neighboring jurisdictions (Table 4). These organizations represented 35 per cent of the counties and 8 per cent of the cities classed as full-time organizations.

Against the inadequacies and vacancies just cited, must be balanced not only the

TABLE 3

Proportion of Total Population of the United States Having a Full-time Health Officer and Sufficient Personnel of Designated Classes Employed Full Time by Official Health Agencies or by other Official Agencies Rendering Some Type of Health Service†*
Total Population of the U. S.—139,217,263‡

Class personnel	*Population having a full-time health officer and sufficient personnel of each class to meet minimum standard*	*Per cent of total population of the U. S. having a full-time health officer and sufficient personnel of each class to meet minimum standard*
All classes of designated personnel	6,521,553	4.7
Physicians	40,239,914	28.9
Nurses	17,508,257	12.6
Sanitation personnel	77,468,072	55.6
Clerks	55,670,827	40.0

* Minimum standard for personnel of four designated classes as agreed upon by the American Public Health Association, Committee on Administrative Practice, Subcommittee on Local Health Units:
1 public health physician for every 50,000 persons (or for every local health jurisdiction of fewer than 50,000),
1 public health nurse for every 5,000 persons,
1 sanitary engineer or sanitarian for every 25,000 persons,
1 clerk for every 15,000 persons.

† From *Report of Public Health Personnel, Facilities, and Services* submitted by full-time local health jurisdictions of 47 states and by the District of Columbia for the fiscal year ending June 30, 1947. (Vermont has no full-time local health organizations.)

‡ For states completely reported, local estimate of total population is used; for states not completely reported, 1940 Census population for unreported areas is used to complete the state total. Resulting total for the U. S. is less than 1947 Bureau of the Census estimate because many local areas, having no recent local estimate available, used 1940 census population in making reports.

TABLE 4

Number of Full-time Health Departments Rendering Local Health Service and Counties Included, with Position of Health Officer Vacant, or Temporarily Served by a Neighboring Health Officer, by Class of Health Organization, June 30, 1948 *

Class of health department organization	Total number of full-time health departments and counties included		Number and per cent of full-time health departments and counties included with health officer vacancies			
			Departments		Counties	
	Departments	Counties	Number	Per cent	Number	Per cent
Total health departments rendering local health service †	1,266	1,668	295	23.3	578	34.7
Local health departments	1,195	1,312	270	22.6	383	29.2
Single county (including city-county)	(653)	(653)	(173)	(26.5)	(173)	(26.5)
Local health district	(261)	(659)	(74)	(28.4)	(210)	(31.9)
City	(281)	(–)	(23)	(8.2)	(–)	(–)
State health districts rendering direct local service †	71 ‡	356	25 **	35.2	195	54.8

* Based on the Directory of Full-time Local Health Officers. Suppl. 194 (1948 Revision). *Pub. Health Rep.*

† In addition, there are 53 state health districts, including 290 counties, organized primarily for supervisory and advisory service. Of these, 13 districts—including 108 counties—had health officer vacancies.

‡ Ten of these districts cover parts of counties only; therefore, no entry is made for them in the "Counties" column.

** Three of these districts cover parts of counties only; therefore, no entry is made for them in the "Counties" column.

increasing numbers of the four basic categories of health personnel—physicians, nurses, sanitarians, and clerks—in the last dozen years, but also the growing variety of personnel generally employed in local health organizations. From 1935 to 1947, for example, there was a threefold increase in the number of full-time nurses and nearly a fourfold increase in the number of sanitarians employed in county health departments and local health district organizations (Table 5). The pattern in local health department staffs may also be described as one of steady expansion for such newer health workers as dentists, laboratory workers, health educators, and nutritionists. Growth in such professional personnel is reflected in the "All Others" group shown in Table 5.

TABLE 5

Personnel Employed Full Time by Full-time County Health Departments, Including City-County Organizations, and by Local Health Districts for the years 1935 and 1947 *

Class of personnel	Number of Personnel employed	
	1935 †	1947 ‡
Total	3,435	11,349
Physicians	601	808
Nurses	1,339	4,055
Sanitation personnel	593	2,267
Clerks	621	2,573
All others	281	1,646

* Independent city health departments excluded; also state health districts, except in Delaware and New Mexico where these districts are often considered as local. Data not available for 1935 for these types of organizations.

† Mountin, Joseph W., Hankla, Emily K., and Druzina, Georgie B. Ten Years of Federal Grants-in-Aid for Public Health, 1936–1946. *Pub. Health Bull.* No. 300.

‡ From *Report of Public Health Personnel, Facilities, and Services* submitted by local health jurisdictions of 47 states for the fiscal year ending June 30, 1947. (Vermont has no full-time local health organizations.)

FUNDS

Funds for local health purposes have steadily increased during the last few years. While the true increases in state and local appropriations for such purposes cannot be precisely determined because of the incompleteness of financial data and inconsistencies in reporting such information for the early years, it

TABLE 6

Expenditures for Local Health Services by State and Local Health Departments as Reported to the Public Health Service, According to Source of Funds, for the Fiscal Years 1937, 1940, and 1948 *

Source of Funds	Amount			Per cent		
	1937 †	1940 †	1948 ‡	1937	1940	1948
All sources	$11,610,552	$28,677,528	$93,142,617	100.0	100.0	100.0
State government	1,581,931	4,339,577	18,936,177	13.6	15.1	20.3
Local government	6,088,486	15,782,090	59,292,305	52.4	55.1	63.7
Federal grants-in-aid allocated by P.H.S.	2,808,227	6,547,823	10,538,533	24.2	22.8	11.3
Other sources **	1,131,908	2,008,038	4,375,602	9.8	7.0	4.7

* Exclusive of operating costs of hospitals and sanatoria. The complete picture of expenditures for local health services cannot be determined precisely. In some instances, especially in earlier years, reports upon which the totals were based failed to include jurisdictions or activities unless expenditures involved funds allocated to the states by the Public Health Service.

† Mountin, Joseph W., Hankla, Emily K., and Druzina, Georgie B. Ten Years of Federal Grants-in-Aid for Public Health, 1936–1946. *Pub. Health Bull.* No. 300.

‡ Information on file in the Division of State Grants, Public Health Service. Excludes liquidation of previous years' encumbrances and construction.

** For the most part, "Other" funds are those allocated by the Children's Bureau under terms of title V of the Social Security Act. Money donated by foundations is included if expended by the health department.

is known there has been substantial growth in the amount of funds expended for local health work. As reported to the Public Health Service by the states, expenditures of funds from state sources for local health services rose from 1½ million dollars in 1937 to almost 19 million dollars in 1948. Available information on local governmental appropriations, likewise, indicates a substantial increase for the same period (Table 6). These figures, impressive in themselves, are exclusive of many services provided by the state health department directly to the people, such as those represented by state-operated venereal disease facilities, mobile tuberculosis clinics, and aid toward the operating costs of hospitals and sanatoria.

I have cited these few figures to show that, despite the gaps and frequent inadequacies, definite progress has been made, both in the establishment and maintenance of local health organizations and in the expansion of existing services. It is not too much to say that this in itself is an index of change in the status and functions of local health organizations and, through them, of the application of advancing concepts in the scope of local health services.

LOCAL HEALTH SERVICES

Turning to the content of local health programs, it can be seen that these programs embody a rather broad concept of health department responsibility for health services. Local, as well as state health agencies, are gradually assuming responsibility for a wide range of health services. In addition to the traditional health department activities of sanitation, communicable disease control, health education, and the like, various new clinical and medical corrective services are now being made available on the local scene (Table 7). The fact that in 1947 there were 2,328 diagnostic and treatment clinics for venereal disease, 4,237 medical well child centers, 453 diagnostic and treatment clinics for cancer, and 628 mental hygiene clinics operated by health departments or by other official or voluntary agencies, attests to the growing attention to personal health services (Table 7).

Base data on earlier health programs are not available for local health departments, but a comparison of current state projects with those conducted a little over a decade ago may serve in some measure to indicate the relative increase in scope of local health activities. This

TABLE 7

Number of Public Health Clinics of Specified Types Operated by Health Departments and by Other Official or Voluntary Agencies Rendering Some Type of Health Service in Local Areas Having a Full-time Health Officer *

Type of Clinic	*Total Number of Clinics*	*Number of Clinics Operated by Health Departments*	*Number of Clinics Operated by Other Official or Voluntary Agencies*
Tuberculosis diagnostic †	1,325	879	446
Venereal disease ‡	2,328	1,962	366
Medical maternity †	2,182	1,536	646
Medical well child †	4,237	3,548	689
Collapse therapy for non-sanatorium patients	831	350	481
Pediatric †	988	376	612
Tumor diagnostic and treatment	453	62	391
Tumor diagnostic only	238	45	193
Mental hygiene	628	129	499
Polyclinic service	679	200	479

* From *Report of Public Health Personnel, Facilities, and Services* submitted by full-time local health jurisdictions of 47 states and by the District of Columbia for the fiscal year ending June 30, 1947. (Vermont has no full-time local health organizations.)

† Held at least monthly.

‡ Held at least weekly.

is so because state health department activities tend to be complementary in one way or another to local programs. Practically all the examples of growth in Table 8 are known to have their local counterparts.

Besides the numerous auxiliary services—diagnostic and educative—offered by voluntary agencies to localities, many services provided by state health departments may be considered local in character. This includes provision of drugs and biologicals, operation and support of various clinical facilities, the preparation and dissemination of health education materials, and laboratory diagnostic aids. When all the services are combined—local health organizations, voluntary agencies, and supplementary state facilities—it can be seen that the health services available to a great many localities cover a wide range. This should not, of course, blind professional health workers to the need for the expansion and extension of services in the areas where they are weak or completely lacking. But it does testify to the fact that the concept of local health services has advanced considerably beyond what was considered reasonable or adequate a decade ago.

CHANGING PUBLIC HEALTH NEEDS

I have briefly indicated the scope of local health services currently made available, services which in some respects reflect the changes in recognition of public health problems. It is worth while to examine these problems in greater detail, since the health programs of the future will undoubtedly be increasingly fashioned around the needs and conditions which are revealed as significant by mortality, morbidity, and population data. The outstanding factors which will determine the direction of public health activities for the next decades are, by now, well known—the general aging of the population and the increase in chronic diseases. As a result of effective control of the infectious diseases and a general decline in the birth rate, there has been a marked shift in the population from youth to the older ages (Table 9). For example, it is estimated that by 1950, 7.6 years will have been added to the median age for the entire population since 1900. Less than one-fifth of the population was 45 years or older in 1900; conservative estimates indicate that by 1960 almost one-third of the population will be 45 years of age or over. The proportion of persons 65 years and older,

TABLE 8

Number of States Reporting a Specified Activity as an Identified Project Initiated Within or Prior to Designated Years*

Activity	States Initiating Projects Within or Prior to Specified Year	
	1935 †	1948 ‡
Communicable disease control	39	46
Tuberculosis control	19	46
Venereal disease control	28	46
Malaria and mosquito control	20	30
Sanitation	45	46
Industrial hygiene	4	46 **
Laboratory services	44	46
Public health nursing	30	46
Maternity and/or child health services	36	46
Public health education	16	45
Dental services	18	43
Cancer services	5	46 **
Mental hygiene	1	43 ¶
Nutrition	7	42
Hospital survey and planning	..	45 ††
Personnel administration	14	45
Personnel training	18	44
Local health administration	31	46
Vital statistics	45	45 ¶

* Initiation dates of "identified projects" not reported by one state. One other state reported initiation dates only for "Cancer control" and "Mental hygiene."

† Mountin, Joseph W., Hankla, Emily K., and Druzina, Georgie B. Ten Years of Federal Grants-in-Aid for Public Health, 1936–1946. *Pub. Health Bull.* No. 300. Data from this source apply only to projects conducted by the health department.

‡ As reported by state health departments in the *Annual Combined Report and Plan* for the fiscal year 1949.

** Includes two states in which activities are the function of a state agency other than the health department.

¶ Includes 17 states in which administration of activities is the responsibility of a state agency other than the health department.

†† Includes 9 states in which administration of activities is the responsibility of a state agency other than the health department.

¶ Activity not a function of the health department in one state.

the group showing the most striking changes, has almost doubled since 1900, and the best indications are that over 9 per cent will be in what is usually designated as the old-age bracket by 1960.

The changes in gross mortality figures and in the leading causes of death since 1900 are equally significant. The diseases which threatened during infancy, childhood, and the most productive periods of life have, to a considerable extent, been conquered. The leading causes of death today are those which are most commonly associated with the older ages—the chronic diseases (Table 10). Such diseases as diphtheria have

TABLE 9

*Distribution of the Population by Age Groups in 1900 and 1940, and Estimated Distribution in 1950, 1960, and 1975**

Age Group	Percentage Distribution for Specified Years				
	1900	1940	1950	1960	1975
Under 5 years	12.1	8.0	8.3	7.0	6.8
5–14 years	22.4	17.0	17.4	16.0	14.5
15–24 years	19.6	18.2	15.2	16.3	14.1
25–44 years	28.1	30.1	30.3	29.0	29.0
45–64 years	13.7	19.9	21.1	22.6	24.7
65 years and over	4.1	6.8	7.7	9.1	10.9
Median ages in years	22.9	29.0	30.5	32.7	34.1

* Data for 1900 from U. S. Bureau of the Census: Population, Second Series, U. S. Summary, 1940. Data for other years from U. S. Bureau of the Census: Forecasts of the Population of the U. S., 1945–1975, 1947.

disappeared from the ten leading causes of death. At present, only one of the ten—premature birth—is associated with early life; on the other hand, such chronic illnesses as diseases of the heart, cancer, and diabetes account for an increasing part of total mortality of today. In even greater measure the morbidity picture is being altered by these same disease trends.

The implications of an older population and an increase in diseases which are characteristic of middle and later life are plain for the health officer. He must now adapt to greatly altered problems the machinery and techniques developed for earlier public health programs. A clear concept of the public health aspects of the chronic and degenerative diseases must not only be developed in health departments but also must be transmitted to medical, welfare, and other groups which have an interest in or an operating responsibility for these matters. The control of chronic disease, the extension of the period of active life, and the provision of adequate public health protection for the aging segment of the population, largely neglected up to now in our thinking, represent the current opportunities and the challenges to health officers and health organizations.

THE LOCAL HEALTH DEPARTMENT'S ROLE

While health departments have embarked on some of the newer programs that are relatively well defined, they have tended to be slow in entering others where patterns are not so clear-cut or where a lack of social policy furnishes a basis for conflict. In most of the new areas of public health responsibility there is much scientific and administrative pioneering to be done. Broadly speaking, the health department's range of activity involves investigation, prevention, case finding and education, the provision of diagnostic auxiliary aids to the clinician, and the administration of various public services and facilities having to do with care or rehabilitation. As illustrations of the place of the health department in the new public health programs, we may take the patterns now being formulated in connection with mental health and diabetes.

Mental hygiene has had several alternating periods of enthusiasm and apathy but now appears on the way to developing a pattern of public health responsibility for the mitigation and prevention of mental illness. From the standpoint of federal participation, the mental health program is relatively new, having received legislative recognition only since

TABLE 10

Ten Leading Causes of Death for the Years 1900, 1930, and 1946 *

1900	*1930*	*1946*
1. Pneumonia (all forms) and influenza	1. Diseases of the heart	1. Diseases of the heart
2. Tuberculosis (all forms)	2. Pneumonia (all forms) and influenza	2. Cancer and other malignant tumors
3. Diarrhea, enteritis, and ulceration of the intestines	3. Cancer and other malignant tumors	3. Intracranial lesions of vascular origin
4. Diseases of the heart	4. Nephritis	4. Nephritis
5. Senility, ill-defined, and unknown	5. Intracranial lesions of vascular origin	5. Accidents, excluding motor-vehicle accidents
6. Intracranial lesions of vascular origin	6. Tuberculosis (all forms)	6. Pneumonia (all forms) and influenza
7. Nephritis	7. Accidents, excluding motor-vehicle accidents	7. Tuberculosis (all forms)
8. All accidents	8. Premature births	8. Premature births
9. Cancer and other malignant tumors	9. Senility, ill-defined, and unknown	9. Diabetes mellitus
10. Diphtheria	10. Motor-vehicle accidents	10. Motor-vehicle accidents

* National Office of Vital Statistics, Public Health Service: United States Summary of Vital Statistics, 1946. *Special Reports*, Vol. 28, No. 1 (Sept. 13), 1948.

1946. The local program has still not taken on any final form, but is being developed along broad preventive and educational lines. Central facilities are being established in communities to handle some of the problem cases and to serve as auxiliary clinics to the mental hospital, but, more especially, to initiate and guide a community program designed to impart a broad understanding of the principles of mental hygiene. These clinics are the agencies through which common personality and emotional difficulties are explored. They serve as the focal points for anticipating and adjusting conflicts which may arise in normal parent-child, teacher-pupil, and employer-employee relationships. Case finding programs, aimed at highlighting the individuals with specific emotional difficulties, depend upon mental health education of the community at large and the dissemination of information about mental health principles and practices. Efforts to incorporate mental hygiene principles in normal, everyday relationships in the home, the school, the industrial plant, and in the welfare and social agencies mean that increased training in mental health—through such methods as orientation or refresher courses and consultative services—must be made available to public health personnel, physicians, welfare and social workers, teachers, and others in public service.

In terms of numbers affected, diabetes is an important chronic disease and offers an excellent opportunity for a sound public health program. According to latest estimates, there may be as many as two million diabetics in the country, nearly half of whom are unaware that they have the disease; diabetes morbidity may be expected to increase even more in the future because it is a disease of middle age and older life in an era of an aging population. Since early discovery of diabetes is the most important single factor in its control, the initial phases of a community control program are usually built around case finding. Early discovery of diabetes is possible through urine and blood examinations, for which screening techniques amenable to mass application have now been developed. An educational campaign on the control of the disease can go hand in hand with the case finding program. Investigation of epidemiological facts associated with the occurrence of the disease and follow-up activities, through home visits by nurses to assist the attending physicians in obtaining regular and routine checkups, are also included in the local control program.

Classes for diabetics have proved a beneficial and valuable part of a local diabetes control program. By means of group instruction, individuals with diabetes are taught how to prepare their diets, how to examine urine, how to inject and use insulin, and how to adjust to their conditions so as to live normal, active lives. Because the classes can accommodate relatively large groups of people, they are economical and practical; moreover, they are a valuable aid to the physician in helping him to control the course of the disease and prevent complications.

HEALTH SERVICE AREA

In discussing the organization of local health departments, I mentioned the increasing trend toward health service districts. This has been one answer to the problem of what the health service area is and what it should consist of. Local health departments rendering various kinds of public health services have sprung up in chaotic fashion throughout the United States. These units serve many types of geographical areas—towns, cities, single counties, and, in the case of district health units, combinations of two or more such areas. The public health workers who pioneered the development of local health units were primarily interested—and rightly so—in the establishment of machinery to pro-

vide at least minimal health protection for the people wherever it was possible to do so. Although methods of districting and systematic planning were advocated, the pattern which has evolved is characterized essentially by opportunism.

The stimulus to an orderly construction of hospitals and health centers provided by the Federal Hospital Survey and Construction Act of 1946 introduced a new factor which may well be considered in the planning of public health service areas. This Act opened the way for the erection of physical facilities which seemed destined to become closely related to the work of health departments, especially in rural areas. Professional public health workers should now consider the development of local health units in a nation-wide pattern integrated with the planning for hospitals and health center buildings. Up to the present, there has been little coördination of hospital and health department programs, with the hospital placing emphasis on the treatment of acutely ill persons while the health department has confined its activities to programs dealing primarily with the prevention of disease. With the line of demarcation between prevention and cure rapidly disappearing, the local health department must assume a new role in protecting the health of the community. Any system which makes hospitals and health departments mutually exclusive is uneconomical and certain to become outmoded.

In carrying out a broadened public health program, the health officer and his professional staff need the coöperation of the medical profession and the full utilization of the general hospital facilities of the community. Local as well as district or regional hospitals should become the nuclei of medical service areas. The integration of public health activities in these patterns of medical service areas would be a big step forward in providing better and fuller health services. Such a pattern would mean that hospital and health center facilities, as well as expensive diagnostic equipment needed by both hospitals and health units, would be more efficiently used. Specialized staff members of hospitals and health departments could become available to both agencies on a coöperative basis; the result would be improvement of community health programs in such fields as tuberculosis, venereal disease, cardiovascular diseases, diabetes, mental hygiene, and cancer control. In addition, coöperative planning would bring the benefit of single service areas for hospitalization and local health services; thus, the movement of population to secure medical and hospitalization services and public health services would flow in one direction rather than in many directions as is frequently true at the present time.

NEW OPPORTUNITIES IN FAMILIAR FIELDS

Current emphasis for changes in program content seems to be placed on personal health services, especially with regard to the chronic diseases. This is quite appropriate. At the same time, it is well to examine some of the more traditional areas of health department activity for additional opportunities. I refer specifically to environmental control in a broader sense than heretofore used.

Of the ten leading causes of death to which I referred earlier, the one which takes its heaviest toll of the younger age groups is accidents. Accidents also rank high in the list of causes of death, disability, loss of productivity, and economic drain among adults. Paradoxically, however, accident prevention has received the least amount of attention by health officers. Until quite recently—and even now, in some quarters—prevention of accidental deaths and injuries was considered outside the realm of

public health. Any modern concept of public health, however, must include accident prevention, particularly home accidents, as a logical job for public health agencies. The fact that home accidents alone cause well over 30,000 deaths and result in the injury of about 5 million people a year, indicates that an area of profound significance for national health and well-being has been virtually ignored by public health agencies. Research on the causation of accidents must be undertaken intensively, epidemiological patterns must be established, the emotional and psychological factors in accidents must be investigated, and wide-scale educational and preventive campaigns must be begun.

The insect and rodent control problem is still a serious one in many parts of the country and diseases to which these pests give rise represent a continuing menace. Full advantage should be taken of the newer methods for controlling flies, mosquitoes, fleas, rats, and other vermin which are reservoirs or vectors of disease and which interfere with human comfort and welfare. Without continuous and community-wide control programs by local health departments, residents are likely to be inadequately protected from potentially grave health hazards.

Several diseases which can be communicated to man from animal reservoirs—such as rabies, brucellosis, and salmonellosis—should be of serious concern to health authorities. The number of reported cases of rabies, for instance, has increased alarmingly in the last several years. While many communities have very effective rabies control programs, others are still relatively weak. With the proper use of diagnostic facilities for rabies, an adequate immunization program, and an active educational campaign to promote public coöperation in the vaccination and registration of animal pets, most communities can carry on adequate rabies control programs. Concerted community and state, as well as national, efforts can bring about the ultimate eradication of rabies in the United States.

Similarly, brucellosis is a challenge to public health leaders. It demands epidemiological investigation as well as the adoption of certain measures to prevent its spread. Since this disease is most serious among farmers and other workers in animal industries, health departments serving areas in which such pursuits are followed intensively should consider the control of brucellosis one of their important responsibilities.

The control of the pollution of the country's water resources by domestic sewage and industrial waste was designated as a public health problem in the Water Pollution Control Act of 1948. This Act marked the recognition that concerted action by the federal government, interstate agencies, state water pollution control agencies, and localities is necessary to clean up the polluted interstate waters which are a danger to human health and welfare. Although this is largely a state and interstate program, ultimate success depends in great measure on the part played by local health departments.

The recent "smog" disaster in a small city in Pennsylvania dramatically pointed up one aspect of the necessity for adequate atmospheric polution control measures. Atmospheric pollution, of course, is of serious public health concern to communities exposed to the fumes, smoke, and dust from industrial establishments. It has even broader public health significance, however, as the carrier of substances and elements injurious to health, comfort, and livability. Enteric diseases have been brought to a low level of incidence by sanitation procedures directed toward substances that enter the body by way of the gastrointestinal tract. The air, however, now remains the great avenue for the entrance of infectious and toxic

substances. A program of pollen control, for example, might contribute considerably to the mitigation of asthma, hay fever, and various allergies which are sources of chronic ailments and which interfere with economic productivity and with individual health and comfort. One of the great challenges to public health, now and in future years, will be to accomplish with air control results comparable to those attained through such measures as water purification, milk pasteurization, and food preservation. Considerable research and investigation is still necessary to determine the precise effects of various atmospheric contaminants on human health and to establish effective control measures. Local health departments, however, should be aware of the problem and take advantage of any opportunities to investigate their own needs in this respect and to assist in coöperative endeavors to eliminate the danger and the nuisance of atmospheric pollution.

It is the local health department to which citizens must look for the establishment and broadening of such health services, vital to the community's welfare, as I have just indicated. The health department contains the biological and, to a certain extent, the social competence which, together with its legal authority and administrative experience, enables it to launch and continue comprehensive programs of community health. Instead of becoming overly engrossed in the minutiae of a restricted field, the health department might well broaden its interest and make its staff, resources, and facilities available for administering a wide variety of public programs. By so doing, its stature and usefulness in the community would be immeasurably enhanced to the ultimate public benefit and profit.

JOURNALS WANTED

The Association will appreciate it if members who can spare copies of the March, April, and June, 1949, issues of the *Journal*, will send them collect, addressed as follows: Circulation Department, American Public Health Association, 1790 Broadway, New York 19.

The National Blood Program of the American Red Cross

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COMPLETION of the first seventeen months of operation of the National Blood Program suggests that an appropriate time has arrived to review for the members of the American Public Health Association some of the more salient facts concerning the genesis, development, and present status of this large-scale undertaking by the American Red Cross.

Bearing important implications to our citizens from the standpoint of their health, and promising to be an effective adjunct to the medical profession of the nation, the proposal to initiate the program was first announced by President Basil O'Connor in a letter to the Red Cross chapters on July 17, 1947. With the endorsement of interested government agencies, the Division of Medical Sciences of the National Research Council, and a number of non-governmental agencies concerned with health, the first unit of the new project was instituted on January 12, 1948, by the activation of a blood collecting and processing center at Rochester, N. Y., as the focal point for a regional program in 11 counties. By the end of May, 1949, there were 25 regional programs in operation, including an all-mobile unit service in the State of Massachusetts.* Such rapid expansion was made possible through careful planning by the American Red Cross, based on the experience gained in meeting the unprecedented need of blood for use by the armed services in World War II.

During the war 13,326,242 pints of blood were obtained from voluntary donors by the Red Cross. That imposing procurement record was achieved by the chapters in 35 cities through the operation of donor centers, and by chapters in smaller communities to which 63 mobile units were dispatched from the urban centers. Of the foregoing huge quantity, 12,628,645 pints were processed into dried plasma and serum albumin for use overseas, 310,135 pints were delivered for use as whole blood or liquid plasma at military hospitals in the United States, and 387,462 pints of group "O" whole blood were flown overseas.[1]

Even before the end of the war the accomplishments of the Red Cross in procuring blood for the armed services resulted in a demand that the agency institute a similar service for the benefit of the civilian population. Accordingly, consultations were held with representatives of the U. S. Public Health Service, the Board of Trustees of the American

* In addition to the state-wide mobile unit service in Massachusetts, regional programs are in operation with centers in the following cities: Rochester, N. Y.; Wichita, Kan.; Stockton, Calif.; Atlanta, Ga.; Washington, D. C.; Los Angeles, Calif.; Tucson, Ariz.; San Jose, Calif.; Omaha, Nebr.; Springfield, Mo.; St. Louis, Mo.; Charlotte, N. C.; Detroit, Mich.; Yakima, Wash.; Great Falls, Mont.; Columbus, Ohio; St. Paul, Minn.; Lansing, Mich.; Nashville, Tenn.; Portland, Ore.; Boise, Ida.; Philadelphia, Pa.; Asheville, N. C.; and Louisville, Ky.

Medical Association, the Annual Conference of Secretaries of State Medical Associations and Editors of State Medical Journals, the Association of State and Territorial Health Officers, the American Hospital Association, and other organizations. All agreed that the Red Cross should authorize its chapters to coöperate with state and local health departments, and other qualified agencies, in the procurement of blood for civilian use.

In April, 1945, the governing body of the American Red Cross voted that chapters desiring to do so might participate in a civilian blood donor service sponsored by a qualified medical or health agency, but limited their activity to the recruitment and enrollment of volunteer donors and to the provision of non-technical staff and equipment. It was specified, however, that authorization be given to chapters individually with the understanding that responsibility for the technical operations would be vested in medical or health agencies which met necessary requirements. In August, 1945, the plan was modified to permit a chapter under certain conditions to collaborate with the sponsoring agency to the extent of assuming complete responsibility for the operation of the center if circumstances warranted, including the provision of both technical and non-technical staff and equipment.

These so-called "permissive programs," functioning independently of each other, have never been organized along the cohesive and uniform lines essential to the operation of a national blood program. Activated mostly within the past two years, 89 such units were reported for the first three months of 1949. Many were being utilized for recruiting, registering, and typing (blood group) prospective donors but probably not more than one-third were actually furnishing blood to hospitals. During the quarter, only 21,000 pints of blood were obtained through this medium.

Important in the genesis of the National Blood Program was a survey in the fall of 1946 which disclosed a rather heterogeneous condition. Scores of chapters in North Dakota, Michigan, and Massachusetts were coöperating in blood programs operated by the Health Departments of those states. For example, in that year in Massachusetts 27,065 units of blood of 500 ml. each were distributed to 78 hospitals.[2] In contrast to these state-wide programs, only four Red Cross chapters were participating in purely local programs to supply hospital needs for blood, although seven city or county programs had been authorized.

The slowness with which the Red Cross civilian blood donor services were developing under the permissive arrangement, and the likelihood of an eventual shortage of plasma, serum albumin, and immune serum globulin, resulted in a formal recommendation (February, 1947) by the executive committee of the Red Cross Advisory Board on Health Services to the effect that the organization proceed as rapidly as possible to the establishment of a national blood program. In June, 1947, the governing body of the Red Cross endorsed that recommendation and expressed the belief that "there is need for such a program, that the American Red Cross should undertake the responsibility for it, that sufficient blood can be collected from voluntary donors, and that the necessary funds can be raised."

Under its established policy the American National Red Cross refrains from instituting a regional center or program unless specifically requested to do so by the chapters concerned. The application from the chapters must be approved by the county medical society, local health department, and local hospital association covering each community of the region under consideration. The National Blood Program can thus

be construed as a coöperative venture of the American National Red Cross and organizations, institutions, and citizens interested in the task of saving human lives and alleviating suffering.

In the operation of the program the highest professional and technical standards are maintained. To that end, outstanding experts in the field of blood and blood derivatives collaborated in setting up the technical procedures, which are uniform for all centers. On the national headquarters staff in Washington, D. C., Dr. Louis K. Diamond is the Medical Director of the entire program. At each regional center the technical supervision is similarly vested in a medical director. The chapter engages the services of a center director who is responsible for non-medical administration. Locally, a medical advisory committee stands ready to give professional counsel.

Registered professional nurses are assigned to the regional centers after first attending an orientation course at one of the four area headquarters of the American Red Cross (Alexandria, Va.; Atlanta, Ga.; St. Louis, Mo.; and San Francisco, Calif). The technical procedures of venipuncture, of testing and storing the blood, and distributing the fluid to the hospitals, are so far as practicable the same at all centers. An Administrative Assistant (Statistics) is in charge of the records pertaining to blood donors, to laboratory tests of the blood, and to distribution of blood to participating hospitals. As in other Red Cross services, a substantial share of the activities is carried on by trained volunteer workers. The cost of the program is borne jointly by the national organization and the constituent chapters.

In the smaller communities, visited periodically by mobile units from the regional centers, the blood collecting procedures are identical with those at the centers. Mobile units are sent also to large industrial concerns during working hours. Both inside and outside of the regional center cities, the National Blood Program staffs of the area headquarters of the Red Cross function as advisers to the staffs of the centers, who, in turn, assist the outlying chapters in the extension of the program to the communities within their jurisdictions.

To estimate how many lives can be saved, or how many patients successfully treated, through operation of the program is something no competent statistician would venture in the present stage of increasing use of blood and its derivatives. The quantity of blood needed annually is calculated now on the basis of the number of beds in the hospitals of this country. At the present time there are approximately 1,423,520 beds, 35 per cent of which are in civilian general hospitals. The remaining 65 per cent are under government jurisdiction: Army, Navy, Air Force, Veterans Administration, Public Health Service, Bureau of Indian Affairs, and federal prisons. Included in the total are more than a half million beds in hospitals for tuberculous and for nervous or mental patients.

Experience has indicated that five pints of blood annually for each bed in general hospitals and one pint for each bed in the other hospitals are probably reasonable allowances for current needs, which means 3,700,000 pints of blood annually. In announcing that the American Red Cross would undertake to help supply that quantity, President O'Connor stated that the Red Cross would make no charge for the blood and blood derivatives it provides to physicians and hospitals for the treatment of their patients. The only charges to recipients are those made by the physician or hospital in connection with the administration of the products. Under this arrangement, blood and blood derivatives are made available not only to civilian hospitals but to military and veterans' hospitals as well.

Between January 12, 1948, and the end of May, 1949, the American Red Cross made available 242,782 pints of blood for the use of physicians in the communities served by the national program. That quantity was contributed by 207,183 persons, 17.8 per cent of whom were sufficiently interested to donate a second or third time. In addition, 29,955 persons were rejected, chiefly for medical reasons, and 3,114 were unable to contribute a sufficient quantity for them to be counted as productive donors. On bringing these figures together, it is found that 240,252 persons actually presented themselves as possible donors.

A major problem in operating the National Blood Program is the development of ways and means of persuading the people of the communities to contribute blood. While the earlier, wartime program was functioning, personnel directors and other leaders of employee groups rendered outstanding service in making donor recruitment a success. That the coöperation of such leaders and groups, notably those in which men predominate numerically, continues to be a potent force to assure procurement of a satisfactory blood supply is indicated by the summary figures relating to 15 selected regional programs.* From the activation dates of these programs to the end of May, 1949, men constituted 72.4 per cent of the donors. The median age of the men was 33.5 years and the women 35.9 years. Three-fourths of the men were in age brackets below 41.5 years and three-fourths of the women below 45.8 years. The data therefore suggest that special recruitment appeals to the women and to persons in their late 40's and from 50 to 59 years old inclusive are desirable in the interest of securing broader community participation.

In the initial 17 month period whole blood was distributed to 1,050 hospitals, 137 physicians, and 46 independent clinics; and 816 communities were visited by mobile units in accordance with schedules arranged many weeks beforehand. Approximately 67 per cent of the total quantity of blood collected was used in communities within the regional center city chapter jurisdictions while the blood donations therein constituted 55 per cent of all donations. The difference between these proportions is believed to reflect a considerable urban hospital demand for blood for patients from the outlying communities. Of the 25 regional programs listed in the first footnote, the last 13 were activated subsequent to August, 1948, and on May 31, 1949, the average period of operation had been only 8¼ months for the entire number. In view of this comparatively short net period, the Red Cross is entitled to feel gratified over the scope of the accomplishments recorded.

The comprehensive character of the Red Cross organization and the maintenance of complete records at the centers render the program a potential instrument not only for supplying the usual peacetime regional needs for blood but also for saving lives in the event of a major disaster. Complete information as to the blood group of the individual donor, the Rh factor, his address, and certain pertinent medical history data are all entered on a registration card. The cards are filed alphabetically; hence, whenever the call may come the Red Cross will be in position to refer to the names and addresses of potential donors and to know the total supply and location of the blood available.

The acquisition of data on such a large scale affords an unusual opportunity to

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* Rochester, N. Y.; Stockton, Calif.; Atlanta, Ga.; Massachusetts; Los Angeles, Calif.; San Jose, Calif.; Washington, D. C.; Wichita, Kan.; Omaha, Nebr.; Springfield, Mo.; St. Louis, Mo.; Charlotte, N. C.; Detroit, Mich.; Yakima, Wash.; and Columbus, Ohio. For these 15 regional programs, by the end of May, 1949, data pertaining to 179,938 separate blood donors had been reported.

consider literally hundreds of interrelationships of the medical history items on the registration cards. In technical language, selected factors can be held statistically constant and the degree of net correlation then determined between other selected factors. Considerable scientific interest exists in the distribution of the blood donors according to the four principal blood groups. Although the figures thereon have not been studied from the standpoint of geographic variation, race, and numerous other individual factors, the summary distribution should be reported here. The donors to date have been divided as follows: Group O, 45.7 per cent; Group A, 40.2 per cent; Group B, 10.3 per cent; and Group AB, 3.8 per cent. Apparently this distribution was determined from one of the largest samples (207,183 persons) ever taken under conditions of a standardized control technique throughout. The percentages differ slightly from those previously reported by Snyder [3] in the United States, and Dobson and Ikin [4] in Great Britain, and appreciably from those published by Boyd [5] for many foreign countries.

In addition to the collection of whole blood to meet current needs for transfusion purposes, there is an important collateral phase of the National Blood Program that should be reported. During the first eleven months of the fiscal year 1948–1949 the American Red Cross issued for medical use 590,332 vials (2 ml.) of immune serum globulin; 10,931 vials (100 ml.) of serum albumin; 3,106 vials (20 ml.) of serum albumin; 374,883 units (250 ml.) of dried plasma; and 1,666 vials (5 ml.) of anti-hemophilic globulin. These blood products were obtained mainly from stocks of surplus wartime plasma that were turned over to the Red Cross by the Armed Services. The dried plasma and immune serum globulin were made available generally to the medical profession through state health departments, and serum albumin and anti-hemophilic globulin were provided to certain specialists engaged in clinical studies of these products. The aggregate commercial value of the derivatives distributed by the Red Cross from April, 1944, to June, 1949, is estimated at recent prices to have been approximately $80,000,000.

From the preceding paragraphs it is evident that the American Red Cross, by responding to the request that developed from a successful wartime experience, has embarked upon a humanitarian enterprise that will offer better protection against the suffering caused by disease and injury. To insure that protection the National Blood Program will need the support of thousands of citizens through their contributions of blood, and the continued interest of members of the medical profession. On completion of the first 17 months of operation, there is already in the record evidence of a fine coöperation that promises even better success for the program in the years ahead.

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Persistent Hazards in the Home Accident Pattern

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DURING April, 1941, the Metropolitan Life Insurance Company completed a 12 months' survey of home accidents which had occurred to policyholders and for which the company's Visiting Nurse Service had been requested. In the detailed report of this survey, which was published in the November, 1941, issue of the *American Journal of Public Health*, the data collected were roughly summarized by presenting the following composite picture of a home accident:

"The victim received cuts (lacerations or abrasions) of his legs (feet or toes) as a result of a fall on a level surface against a tool (or sharp object) while he was walking (or running) in the dining or kitchen quarters (or yard)."

In order to determine whether there had been any marked change in the home accident pattern in the intervening years, the company on April 1, 1948, undertook a supplemental and comparative study. Based upon this study, which was also continued for 12 months ending March 31, 1949, the following composite picture could be presented:

"The victim sustained a fracture (or dislocation) of his legs (feet or toes) as a result of a fall on a level surface due to household furnishings (or equipment) while he was walking (or running) in the dining or kitchen quarters."

This picture, although indicating a more serious nature of injury and a different type of object involved from the first picture, follows the original in regard to part of body injured, action of injured, and place of occurrence of accident.

OBJECTIVES OF STUDIES

The two studies were based upon reports submitted by the "Salaried Nurses" of the company who render nursing care to certain types of policyholders in the United States and Canada. These studies were undertaken with two objectives in view: first, to obtain some basic idea of the home accident pattern, as represented by the less serious home accidents—which, although usually causing disabling injuries, neither resulted in fatalities nor were of sufficient severity to require hospitalization; and second, to encourage greater interest in home accident prevention on the part of the company's visiting nurse staff. The importance of the first objective is apparent when it is recognized that available data on home accidents in 1941 were largely concerned with those reported on death certificates and, therefore, included chiefly fatalities, with the exception of several isolated and unrelated studies of hospitalized cases (notably the Cook County, Illinois, study conducted in 1935–1936). Only estimates were available regarding the pattern of the less serious although most frequent home accident. Information regarding this type of home accident was considered essential as a basis on which a constructive and comprehensive

home accident prevention program could be planned. What was true in 1940 and 1941 with respect to information regarding the less serious home accidents was substantially true in 1948 and 1949.

With respect to the second objective of the studies, it was found that the collection and reporting of home accident data by our nurses served as a preliminary inservice training project in developing greater recognition on the part of the nurse of the effect of home accidents on the overall public health problem.

COMPARISON OF STUDIES

The procedures followed in the two studies, conducted 8 years apart, were identical. An additional breakdown of child accidents in the home, however, was included in the tabulated results of the second study. Due to the decline in home nursing visits experienced by public health nursing agencies generally; the closing of some company salaried nursing services; and the transfer of our nursing care to community nursing organizations in some instances, the total case load during the 1948–1949 study was 48.5 per cent of that during the 1940–1941 study, but in the aggregate amounted to over 140,000 cases. The character of the case load also showed some rather significant changes. For example, the percentage of maternity and new-born cases increased from 35 in 1940–1941, to 54 in 1948–1949, and the number of women and children receiving nursing care showed an increase of 3 per cent of the total case load.

The second home accident study was planned to determine changes in pattern and not to measure trends in frequency of occurrence. It is interesting to note, however, that whereas accidents of all kinds accounted for 44.8 cases per 1,000 cases visited by the Metropolitan Nurse in 1940–1941, this figure was reduced to 30.0 per 1,000 cases in 1948–1949. Comparatively, home accidents represented 21.8 cases per 1,000 in 1940–1941 and 16.0 per 1,000 in 1948–1949. This comparable reduction in the number of accident cases reported during a period when cases resulting from many causes of illness were also on the decline, would seem to reflect the benefits of increased home safety educational activities.

That the first study largely reflected the pattern of the less serious home accident, was borne out by the fact that only 13.4 per cent of the home accident cases were hospitalized and only 0.4 per cent were recorded as "discharged by death." During the 1948–1949 study fatalities represented only 0.2 per cent of the home accident cases, but the percentage of hospitalized cases increased to 22 per cent, perhaps a reflection in part of the tendency to utilize hospitalization facilities to a greater extent.

RESULTS OF STUDIES

The Age Pattern

A comparison of the results of the two studies shows some shifting in the age distribution of the home accident cases reported, as indicated by Table 1.

TABLE 1

Age of Injured

	Per cent 1940–1941 *	*Per cent 1948–1949* †
Under 5 years	21.5	23.8
5–14 years	16.2	12.2
15–24 years	5.7	2.9
25–44 years	20.0	14.7
45–64 years	22.9	24.1
65 and over	13.7	21.0
Unspecified	–	1.3
	100.0	100.0

* Based on a sampling of approximately 50% of total cases

† Includes all cases reported

It will be noted that there was a small increase in the percentage of home accident cases in the age group under 5, due undoubtedly to an increase in the population of this group resulting from a higher birth rate. In the age groups 5–14 and 15–24 combined, the percentage dropped from approximately 22 in 1940–1941, to 15 in 1948–1949. A

comparable drop from 20 to 14.7 was noted in the age group 25–44. A small increase was apparent in age group 45–64, with a very marked increase from 13.7 to 21.0 in the over 65 age group. This latter change is due in part to an increasing proportion of older persons in the company's insurance experience. It is, however, an additional indication of problems to be confronted as our aged population increases.

Type of Accident

In this analysis no very pronounced change of pattern was evident, as indicated by Table 2.

TABLE 2

Type of Accident (All Ages)

	Per cent 1940–1941	*Per cent 1948–1949*
Falls from Heights	13	14
Falls on Levels	33	38
Falling Material	2	2
Handling Materials or Objects	11	9
Stepping on Objects	6	6
Collisions with Objects	15	8
Hot or Burning Substances	13	13
Electric Burn or Shock	1	–
Inhaling Gas or Smoke	–	–
Poisons, Not Gas	1	–
Other	5	9
Not Specified	–	1
	100	100

It should be noted that in the 1948–1949 study, falls of all kinds were responsible for more than 50 per cent of the reported home injuries; and that injuries due to "falls on level" showed an increase from 33 per cent of the total in the first study to 38 per cent in the second. "Collision with objects" decreased from 15 per cent to 8 per cent; whereas injuries resulting from "hot or burning substances" remained at 13 per cent of the total.

No attempt was made during the 1940–1941 study to break down the type of accident classification by age groups. Such a breakdown was made of the data analyzed in the 1948–1949 study for the two child-age groups, namely under 5 and 5 through 14. Table 3 contains these data.

TABLE 3

Type of Child Accidents (1948–1949 Study Only)

	Per cent Age under 5	*Per cent Age 5–14*
Falls from Heights	16	12
Falls on Levels	23	24
Falling Material	3	3
Handling Materials or Objects	12	9
Stepping on Objects	4	12
Collisions with Objects	12	15
Hot or Burning Substances	19	13
Electric Burn or Shock	–	–
Inhaling Gas or Smoke	–	–
Poisons, Not Gas	1	–
Other	9	12
Not Specified	1	–
	100	100

From this table it will be noted that "falls" are the first cause of injury in both age groups (nearly 40 per cent under age 5) with "falls on levels" (tripping and slipping accidents) exceeding those due to "falls from heights." "Hot or burning substances" represent the second cause in the under 5 age group and the third cause in the 5–14 age group.

TABLE 4

Objects Involved

	Per cent 1940–1941	*Per cent 1948–1949*
Household Furnishings or Equipment	12	12
Floor Coverings	3	4
Slippery Surfaces	6	6
Toys and Play Equipment	4	4
Tools and Sharp Objects	14	11
Utensils	7	4
Food	3	4
Animals, Insects, etc.	3	1
Heating Equipment, etc.	5	7
Laundering Equipment and Materials	5	3
Inflammable Liquids or Materials	2	1
Other Household Appliances	1	2
Plumbing Fixtures	–	–
Structural Defects	2	1
Firearms	1	–
Automobiles	1	–
Multiple	–	–
Other	14	25
None or Not Specified	17	15
	100	100

Objects Involved

In this classification the most marked change was under the heading "other" where the percentage of all home acci-

dents increased from 14 to 25, indicating a greater diversification of objects involved than was noted in the 1940–1941.

Table 4 contains the figures for both periods. It will be noted from this table that injuries resulting from "tools and sharp objects" decreased from 14 to 11 per cent of the total; those due to "utensils" from 7 to 4 per cent; and those from "laundering equipment and materials" decreased from 5 to 3 per cent. On the other hand, injuries due to "heating equipment" increased from 5 to 7; and those due to "floor coverings" increased from 3 to 4 per cent.

Location of Accident

Although there was some slight variation in the percentage distribution of home accidents by place of occurrence, the general pattern showed little marked change, as indicated by Table

TABLE 5

Location of Accidents

	Per cent 1940–1941	*Per cent 1948–1949*
Living and Sleeping Quarters	15	18
Dining and Kitchen Quarters	30	30
Bathroom	2	3
Hallways, etc.	2	2
Cellar	3	3
Attic	–	–
Stairs or Steps	17	12
Porch, Yard, etc.	27	24
Garage	1	1
Other	2	4
Not Specified	1	3
	100	100

"Dining and kitchen quarters" continued in first place with no change in percentage. "Porch, yard, etc." remained in second place with a small reduction in percentage. "Living and sleeping quarters" showed an increase from 15 to 18 per cent of total and replaced "Porch, yard, etc." in third place. The much maligned bathroom (3 per cent) was relatively small, as usual.

Action of Injured

Again there was considerable increase from 13 per cent of total to 21 per cent

TABLE 6

Action of the Injured

	Per cent 1940–1941	*Per cent 1948–1949*
Walking and Running	37	34
Household Cleaning	3	4
Laundering Duties	4	2
Other Household Duties	8	6
Cooking	5	5
Eating	1	1
Playing	24	21
Tending Heating Equipment	1	1
Other	13	21
None or Not Specified	4	5
	100	100

TABLE 7

Nature of Injury (All Ages)

	Per cent 1940–1941	*Per cent 1948–1949*
Cuts, Lacerations, and Abrasions	26	21
Bruises and Contusions	12	13
Burns and Scalds	21	23
Strains and Sprains	11	8
Asphyxiations	–	–
Fractures and Dislocations	20	27
Poisoning	1	–
Foreign Bodies	1	1
Bites	2	–
Multiple	3	3
Other	3	4
Not Specified	–	–
	100	100

in the item "Other." With this exception, however, there was no marked change in the pattern represented by the action of the injured. Apparently the various home activities are responsible for practically the same proportion of accidents, as shown in Table 6.

Nature of Injury

In the 1940–1941 study "cuts, lacerations, and abrasions" ranked first in the list of injuries resulting from home accidents, with 26 per cent of the total. In the second study this percentage was reduced to 21 and "fractures and dislocations" ranked first, with a percentage of 27, an increase from 20. These facts are presented in Table 7.

In the second study the nature of injury was analyzed for two child-age groups, namely, under 5 and 5 through 14. Table 8 shows this distribution.

TABLE 8

Nature of Child Injuries (1948–1949 Study Only)

	Per cent Age under 5	*Per cent Age 5–14*
Cuts, Lacerations, and Abrasions	33	43
Bruises and Contusions	12	13
Burns and Scalds	39	24
Strains and Sprains	1	5
Asphyxiations	–	–
Fractures and Dislocations	7	8
Poisonings	–	–
Foreign Bodies	1	1
Bites	1	1
Multiple	2	–
Other	3	5
Not Specified	1	–
	100	100

TABLE 9

Part of Body Involved

	Per cent 1940–1941	*Per cent 1948–1949*
Hands and Fingers	16	14
Head, Face, and Neck	11	12
Legs, Feet, and Toes	32	32
Arms	12	12
Eyes	1	1
Trunk	16	17
Internal	2	1
Multiple	10	10
Not Specified	–	1
	100	100

It should be noted that "burns and scalds" and "cuts, lacerations, and abrasions" rank first and second respectively in age group under 5 with a combined percentage of 72 of the total. In age group 5–14, the order is reversed with a combined percentage of 67.

Part of Body Involved

As shown in Table 9, there was no appreciable change in the distribution of home accident by part of body injured, between the two studies.

CONCLUSION

The two studies of home accidents, conducted 8 years apart by "Staff Nurses" of the Metropolitan Life Insurance Company, were confined largely to a determination of the physical and environmental conditions which affected the home accident problem. Comparison of these two studies shows a decrease in the number of home accidents per 1,000 cases visited by the Metropolitan Nurse, with an increase, however, in the percentage of hospitalized cases. The comparison also shows an increase in the percentage of total accidents which occurred in the two extreme age groups, namely, under 5 and over 65, ages in which during recent years relatively large increases in the population have also occurred. This fact, however, is undoubtedly an indication of the need for greater attention to home safety in these two age groups. With this exception, a comparison of the two studies indicates that there have been no outstanding or significant changes in the pattern of home accidents as far as physical and environmental conditions are concerned. The need for the continuation of educational activities along the lines indicated by the home accident pattern is apparent. It is also obvious that additional research to determine mental and emotional causes of home accidents is essential as a basis for a more complete and constructive home safety program.

Preschool Diphtheria Immunization Status of a New York State Community

A Comparison of Physician Reporting with School Entrance Records as Sources of Basic Data

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IT has been long recognized that statistical information obtained from physician reporting is likely to vary considerably in its reliability. Some of this information is used to compute health indices of great significance in evaluating public health needs and programs.

One important index of the health status of a community is the percentage of preschool children who have been immunized against diphtheria. It is currently felt in New York State that this should be at least 70 per cent.

It would seem apparent that, if our present methods of obtaining an index are not reliable, other means should be sought, either to replace, or at least to supplement our existing fact finding system.

The purpose of this paper is to bring out the glaring discrepancy between the reported and the actual situation in a small city as regards preschool diphtheria immunization status, and to suggest an alternate or at least additional means of evaluation.

Information released by the New York State Department of Health, based upon physician reporting, indicated over a 5 year period (June, 1944–December, 1948) that only between 5 per cent and 13 per cent of the preschool population of Rensselaer City was being immunized against diphtheria (see Table 1). Being in close touch with the situation, the Rensselaer County Department of Health felt that these figures were far from being an accurate reflection of the true status.

TABLE 1

Preschool Children Immunized against Diphtheria, Rensselaer City, June, 1944, through Dec., 1948, Based on Physician Reporting

Month and Year	*Est. Pop. under 5 Years of Age*	*Per cent Immunized*
June, 1944	812	8
Dec., 1944	839	8
June, 1945	839	7
Dec., 1945	872	6
June, 1946	872	5
Dec., 1946	955	5
June, 1947	955	12
Dec., 1947	1,040	11
June, 1948	1,044	13
Dec., 1948	1,084	12

As a result the public health nursing staff in the city, with the aid of parent groups, conducted a house-to-house canvass in April, 1949, to elicit an immunization history for each preschool child in the families visited.

A total of 1,061 individual history cards were returned of which 206 were thrown out of the study (197 over-age and 9 with incomplete information). The remaining 855 would seem to be a reliable sample, representing 78.8 per cent of the December, 1948, estimated preschool population. Table 2 presents the diphtheria immunization status of this group. The low percentage in the

TABLE 2

Preschool Children Immunized against Diphtheria by Age Groups, Rensselaer City, Apr., 1949, Based on House-to-House Survey

Age in Years	No. Children	No. Immunized	Per cent Immunized
Und. - 1	188	61	32.4
1	187	142	75.9
2	226	169	74.8
3	139	112	80.6
4	115	103	89.5
Total	855	587	68.6

under 1 year age group is accounted for by the fact that 65 of the 127 non-immunized in this group were under 6 months of age, and as yet had not an opportunity to be inoculated, current practice having not yet swung wholeheartedly toward earlier diphtheria immunization.

In conjunction with the survey, school entrance health records were examined for immunization history on 5 and 6 year old children who first entered school in September, 1948. In general, these children reflect the experience of the preschool population over the preceding 5 years. Table 3 presents our findings.

TABLE 3

Five and Six Year Old Children Immunized against Diphtheria before School Entrance, Rensselaer City, Sept., 1948, Based on School Entrance Records, All Schools

No. Children	No. Immunized	Per cent Immunized
214	203	94.8

The very high percentage immunized (as compared to the current group of 4 year olds in Table 2) is probably because of preschool immunization roundups and last minute stimulation of parents to have their children immunized before school entrance. We are quite sure that next year's school immunization percentage will be higher than that of our current 4 year old group because the parents of those not now immunized have received appointments for our immunization clinic or have signified their intent to bring their children to their family physician.

It however would not seem likely that the very high percentage of immunizations existing on school entrance is due wholly to preschool immunization roundups, but that this is a further addition to an already high percentage immunized. If this were not true, the sudden load upon our clinics and upon private physicians in the community should have been apparent.

SUMMARY

An instance of the unreliability of physician reporting as an accurate index of the preschool diphtheria immunization status of a community has been presented. Although school records are not wholly reliable, probably due largely to late preschool age roundups, they would appear to reflect preschool diphtheria immunizations more accurately than does physician reporting. School entrance records year after year should certainly reflect trends in the immunization status of a community.

RECOMMENDATIONS

The fallibility of physician reporting must be kept constantly in mind when evaluating information received from such a system. The use of other available sources of information, at least as a check, should be encouraged. Although it would be premature to advocate discarding physician reporting as a source of information, the importance of accurate basic data indicates a need for further studies with this in mind.

Finding Hidden Cases

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BY 1945, thousands of syphilis patients had been treated with schedules of therapy employing penicillin in the various Rapid Treatment Centers operated by the U. S. Public Health Service throughout the nation. Post-treatment observation of these patients had convincingly demonstrated the efficacy of this new antibiotic against syphilis. With penicillin, it was now possible to accomplish adequate and effective treatment of syphilis in a matter of days where, formerly—employing arsenicals and bismuth—a year or longer was required to accomplish adequate treatment of the disease.

Serious treatment reactions from the use of penicillin were negligible as compared with those formerly experienced in arsenotherapy. Practically 100 per cent of the patients started on penicillin therapy were able to tolerate maximum prescribed treatment. The once major problem of case holding was all but eliminated.

This picture called for new planning in our future attack of the syphilis problem: therapy was no longer a major problem, treatment facilities were adequate, case holding no longer demanded a major part of the time of control personnel, and a renewed hope was everywhere in evidence. In assaying the future, it was clear that case finding was now our problem, and that our efforts should be directed to the discovery of effective techniques for implementing this activity.

One of the most effective techniques of syphilis case finding to evolve from Georgia's attempt to keep pace with the rapid advances in therapy has been the mass VD-TB Survey.

The initial attempt to do a serologic test for syphilis and an x-ray for tuberculosis simultaneously on a county-wide basis was undertaken in Savannah and Chatham County, Georgia, in the fall of 1945. Since this was the first known effort of its kind, we entered into the experiment with a great deal of uncertainty as to its outcome, and totally without precedent or experience as to the techniques of operation involved. We simply proceeded upon faith in the belief that people would respond upon a wholly voluntary basis to *public information* beamed at motivating them to seek the free blood test and x-ray offered.

Our fears and uncertainty were short-lived, for the results of our first few days of testing convinced us that we had hit upon a novel case finding technique which had appeal far in excess of our fondest dreams. During the 6 week course of this first county-wide VD-TB Survey 70,743 persons voluntarily presented themselves at our stations requesting a free blood test and x-ray. This represented about 75 per cent of the testable population, since we accepted only those above the age of 12. From the 70,743 persons tested, we found 18,678, or 26 per cent, to have positive or doubtful blood test results.

Of the total number tested, 10,549, or about 15 per cent, were found to have syphilis, and approximately one-third of those having syphilis were previously unknown cases. Seventy-one cases of primary and secondary syphilis were brought to treatment.

The results of this first county-wide survey convinced us that the wedding of the *Treponema pallidum* and the tubercle bacillus had an appeal and a future, and that the combination of public information and mass serologic survey as a case finding medium was effective. It further convinced us that case finding on a voluntary basis was practicable, and preferable to the use of compulsion.

With assistance from the U. S. Public Health Service in the form of finances, personnel, and laboratory equipment, we organized an effective survey team of key technical personnel and followed up the initial survey in Savannah and Chatham County with surveys in Columbus and Muscogee County, Macon and Bibb County, and Augusta and Richmond County during 1946. These surveys were as effective as the first.

At the beginning of the Augusta-Richmond County survey we decided to test *Contact Investigation* as a case finding medium in conjunction with public information and mass serologic survey. Two men experienced in the techniques of this medium were assigned to us by the U. S. Public Health Service. Instead of 71, 85, and 87 cases of primary and secondary syphilis found in our surveys in Chatham, Muscogee, and Bibb Counties respectively, we found 196 cases in the Richmond County survey—almost as many as the total found in the three preceding surveys, each of which tested a far greater number of persons than did the Richmond County survey. Contact investigation proved its worth, and has since continued to be employed in our mass surveys.

Temporary serologic laboratories were set up on the spot to process the blood specimens from these first four surveys. Subsequent survey bloods have been processed in our survey laboratory in Atlanta, operated in conjunction with our Central Laboratory.

Following these first four surveys, we have now successfully completed VD-TB county-wide surveys in Colquitt, Thomas Grady, Floyd, Polk, Lowndes, Dougherty, Terrell, Berrien, Atkinson, Coffee, Ware, Tift, Cobb, Troup, Decatur, Mitchell, Sumter, Brooks, Barrow, Elbert, and Rabun Counties. In these 26 counties we have, on the average, tested about 75 per cent of the testable population. A half-million Georgians, or about one-sixth of the total population of the state, have voluntarily responded to the appeal of the VD-TB survey. More than 56,000 have been found to have positive or doubtful serologic tests, more than 39,000 of these were found to have syphilis, and 25,000 of those found to have syphilis were previously unknown cases. More than 800 cases of primary and secondary syphilis have been discovered and placed under treatment. More than 1,400 cases of previously unknown congenital syphilis in children have been discovered and treated.

The VD-TB Survey has proved its worth as a case finding medium. The educational value alone is sufficient to justify its cost and its continuation. Its effectiveness as a control measure is undeniable. From the standpoint of humanitarianism and economics we could ill afford to be without it. Hundreds of thousands of dollars in costs of institutional care for the victims of syphilis have been saved the state through treatment of all cases discovered, whether infectious or not.

We now have sufficient requests from counties in Georgia to fill our survey schedule through 1949 and into 1950.

Other states have adopted our pattern

and are now successfully conducting similar case finding surveys.

This service in Georgia is brought to the counties only upon a request by the local health department, and must have the approval of the local medical society.

While in a county, the survey team becomes a part of the local health department, with the health officer or the president of the local medical society acting as administrative officer. The survey is presented and conducted as a service of the county health department. Community organization by our public relations personnel, working with the local sponsors, precedes the actual testing. All local organizations take part in making the survey a success by making the people feel that it is their survey. The county puts up 10 per cent of the estimated cost of the survey, and the state 90 per cent. The local funds are necessary to defray certain costs that the state is not permitted to pay, the major item being publicity. Based on the population of the county, the actual cost to the county is about 10 cents per capita. A county can be surveyed in from 1 to 6 weeks, depending upon the size of its population. An additional period of 2 to 4 weeks must be allowed, following the actual testing, for follow-up of those having positive or doubtful findings.

One to 2 weeks before the actual testing begins, the survey executive officer and his aides move in. Assisted by local sponsors, they locate permanent testing stations in strategic spots in the downtown area, and arrange schedules for roving stations in industries, schools, and rural communities. These stations where the initial blood tests and x-rays are done are known as primary testing stations. We also arrange for secondary stations where those having positive or doubtful tests are called back for examination and diagnosis. These are usually located in the local health department. Clerical assistants and nurses to assist in drawing blood must be hired locally and instructed in their duties prior to the beginning of actual testing.

A few days before the testing begins, an intensive publicity campaign gets under way. Every known medium for the dissemination of public information is brought into use. Full-page paid newspaper ads, editorials, feature articles, and human interest stories are carried in the local newspapers; paid radio spot announcements and transcriptions are used; posters are displayed; handbills distributed; movies are shown; speakers address interested clubs and other groups; sound trucks carry the message to areas which other media fail to reach; and numerous other ingenious devices for bringing the messages to the people are employed. This publicity continues throughout the testing period.

Each testing station can test approximately 100 persons an hour. About 5 minutes is required for a person to go through the testing station. No undressing is required. All blood specimens and x-ray films are given a number. No worker in the laboratory knows whose blood specimen or whose x-ray he is handling. Only the health officer knows the identity of the specimens. Results of tests are strictly confidential, and are sent to the individual tested by first class mail. No test results are given out over the telephone. All persons having positive or doubtful tests are notified to report to the secondary stations for further study and diagnosis. Those found to have syphilis may go either to their family physician or to Alto Medical Center for treatment. Free transportation is provided for those who go to Alto, and treatment is without cost to the patient. Alto enjoys the reputation of being among the finest public facilities in the world for the treatment of venereal disease. It is a modern 750 bed hospital. There is no waiting list.

Those found to have tuberculosis may

go to their private physician for treatment or they may receive treatment at Battey State Hospital at state expense. Unfortunately, they cannot always be accepted at Battey immediately.

Prior to 1947, *Contact Investigation* had never proved to be a very effective VD case finding medium in Georgia. The whole burden of conducting this activity had been the responsibility of our public health nurses who, even without this responsibility, were overburdened with generalized programs of public health in their counties. In our unorganized counties, practically no contact investigation was being done, and —since no VD case finding activity was taking place in these unorganized counties—no epidemiologic reports were originating from them.

To alleviate this problem in case finding, and having faith in the efficacy of contact investigation as a major medium of case finding, we decided to implement our contact investigation by the addition of communicable disease investigators.

Financial aid was obtained through a coöperative project worked out with the VD Division of the U. S. Public Health Service. A person trained in public health and experienced in VD epidemiology and education was obtained to direct the work. Our project for the first fiscal year—July 1, 1947–June 30, 1948—provided for the employment of only eight communicable disease investigators. It was decided that only college men with outstanding records be employed and trained for the work. By October, 1947, we had employed eight such men. They were given a 30 day training course which included: the history and philosophies of public health, clinical and epidemiological aspects of the venereal diseases, the techniques of contact investigation, techniques of serologic survey, techniques of public information, and thorough indoctrination in VD records. The facilities of Emory University Medical School, Grady Hospital, and Alto Medical Center were utilized in the training of these men. Upon completion of training, one man was assigned to each of the regional offices and two were assigned to the mass VD-TB Survey team. The men in the regional offices were assigned the primary duty of investigating all suspects of primary and secondary syphilis in unorganized counties. They were to locate these suspects, arrange for their examination by private physician, health department clinics in adjoining counties, or Alto Medical Center. They were to refer all such infected suspects to Alto or to private physicians for treatment.

Where diagnostic facilities were inadequate or not readily accessible, they were to refer all lesion cases and positive serologics to Alto or to private physicians for observation and diagnosis. They were also to assist with these activities in nursing and health officer counties where their assistance was needed and requested.

As a second duty, they were to organize and conduct miniature serologic surveys in unorganized counties among selected groups with suspected high incidence and prevalence rates. They were also to assist with such surveys in nursing counties upon request and where time permitted.

As a third duty, they were to assist in the dissemination of public information concerning the venereal diseases, and to facilitate VD control activities in any way possible in our nursing and health officer counties and among our private physicians.

At the close of the first 6 month period of their service, evaluation of their activities reflected such outstanding accomplishment that funds were made available for expansion of the program to include 22 investigators. With this increased force, still more efficient and effective work resulted. The program

has now been expanded to include 30 investigators.

By the close of 1948, contact indices for Georgia had shown phenomenal improvement over the year preceding the initiation of this program. Case finding through miniature surveys conducted by these men for 1948 showed remarkable results. Epidemiology is now being conducted on an efficient and effective basis in areas where, before the addition of this activity, it was nonexistent.

Georgia is now one of the leading states in the nation in the quality of its contact investigation program. Our nurses and health officers have taken a greater interest in it, and have materially assisted in making possible our present outstanding program. Our records and reporting have vastly improved, and our private physicians are making an increasingly finer contribution to the control of VD in Georgia.

As a result of Georgia's success with this program, the U. S. Public Health Service has assisted practically all states where VD is a major public health problem in instituting similar programs.

Routine case finding procedures such as our prenatal blood test law; examination of food handlers, domestic servants, selectees, hospital admissions, etc.; and the inclusion of a blood test as a part of physical examinations by private physicians and health departments, have been productive. Our new premarital law will further implement case finding and should do much to prevent the tragedy of congenital syphilis.

The VD control picture is brighter than ever before—the treatment weapons are at hand, the facilities for treatment are reasonably adequate. Our concentration now must be upon case finding. The index of suspicion of the people must be raised through a higher level of public information. We must continue to *look* for syphilis as a part of every routine examination. We must accelerate contact investigation and mass serology. If public health agencies, private physicians, and—above all—an enlightened public put their shoulders to the wheel we can and will succeed in a very few years in bringing these scourges of civilization under control in Georgia.

Urgent Need for Soap

Soap continues on the list of critical items still needed in Europe. One means for relieving this shortage is announced by CARE through a coöperative, free distribution of soap. For every two wrappers from cakes of Swan soap sent to: CARE, Boston 1, Mass., one cake of the soap will be delivered free in one of the needy countries of Europe. This offer is good through 1949.

Study of the Geographical and Time Progression of a Measles Epidemic in the Mott Haven Health Center District, New York City

November, 1940–April, 1941

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THE Mott Haven Health Center District is located in the most southerly part of the Bronx, with a population of 230,046 as of 1940. The Harlem River forms its southern and western boundaries, the East River its eastern. It extends from 125th Street on the south to 161st and 163rd Streets on the north. The populated portion begins only at 132nd Street. Its longest west-east distance is about 3.1 miles and its longest north-south distance about 1.8 miles. The total district measures, therefore, approximately 5.58 square miles. It is divided into 11 Health Areas, No. 47 being the most southerly.

Until the autumn of 1940, the City of New York had had no measles epidemic for almost 3 years, although one had been anticipated within 2 years. However, in October, 1940, a measles epidemic began in the city, affecting first Brooklyn and Manhattan. A sudden rise in reported cases in the Mott Haven district was noted beginning November, 1940, and between November 1, 1940, and April 1, 1941, there were 3,074 reported cases under 15 years of age. The cases were first reported in the district from its most southerly Health Area, 47. As the epidemic progressed, other parts of the district to the east, west, and north began to report cases. The entire epidemic lasted approximately 6 months. As all the cases in this period accumulated and we could locate the cases by Health Area, it was felt that the study of the geographical and time progression of the epidemic might be epidemiologically interesting and valuable, examining (1) the time it took to travel over small geographical areas, and (2) the possible local causes for its progression in time and space.*

To show the initial concentration of reported cases in Health Area 47 and the sluggishness of the progress of the disease to other areas adjacent or not so far distant, it should be noted that in the first month H. A. 47 reported 69 cases out of 102 occurring in the whole district (see Table 1), while H.A. 37, 1.5 miles distant (see Chart 1) reported none, and Health Areas 40, 41, 42, 43, and 38 only 1 case each. The centers of these five Health Areas are, respectively, 1.1, 0.7, 1.1, 1.8, and 1.3 miles distant from the

* In this study we are not concerned with the periodicity of measles epidemics in New York City. Those who are interested in the relation of infectious cases, susceptibles, etc., in the population, are referred to the work of Soper,[1] Frost,[2] and Wilson.[3]

TABLE 1

Measles Morbidity Study *

Six Months Period, Nov., 1940–April, 1941

Cumulative Monthly Distribution of Total Cases Reported in the Entire Mott Haven District by Individual Health Areas

Health Area	1 month	2 mos.	3 mos.	4 mos.	5 mos.	6 mos.
47	69	136	206	272	328	366
46	4	56	144	217	269	284
45	12	27	76	152	194	209
44	10	46	145	240	314	342
40	1	6	49	169	281	312
41	1	10	53	123	206	235
42	1	6	22	147	318	360
37	0	4	26	106	263	322
43	1	1	6	29	175	288
38	1	3	28	78	138	164
39	2	3	35	126	176	192
District	102	298	790	1,659	2,662	3,074

* Based on reported cases of measles under 15 years of age.

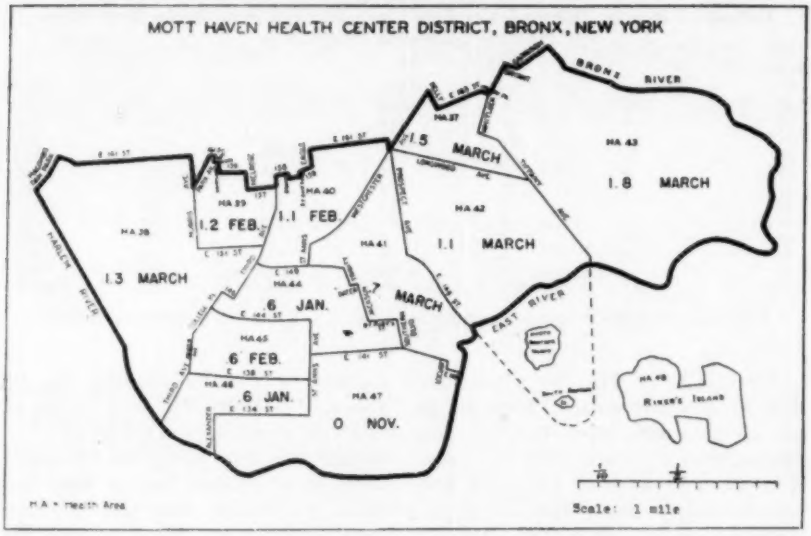
center of H.A. 47. H.A. 46, adjacent to H.A. 47, had only 4 cases. Even at the end of 2 months when H.A. 47 had jumped from 69 to a total of 136 cases, H.A. 40, a distance of 1.1 miles, had reported only 6 cases; H.A. 37, a distance of 1.5 miles, only 4 cases; H.A. 43, a distance of 1.8 miles, only 1 case; and H.A. 38 and H.A. 39, each approximately a little over a mile, only 3 cases each. The slow advance of the epidemic is shown also by the fact that in the first 3 months only about one-fourth of all the cases in the entire district occurred, and in 4 months only a little over half of the cases.

To show in a somewhat different manner the slow and unequal progress of the epidemic, a study was made of the peak month for each Health Area. This was done by an analysis of the monthly morbidity rates per 1,000 population under 15 years of age, estimated on the 1940 census. (For peak months in each Health Area see Chart 1). There was no particular peak in H.A. 47. In H.A. 46 (0.6 miles from the center of H.A. 47) and H.A. 44 (0.6), both of which are adjacent to H.A. 47, the epidemic reached its peak during the 3rd month. In H.A. 45 (0.6) which is also adjacent, in H.A. 39 (1.2), and H.A. 40 (1.1) it reached its peaks only during the 4th month. In Health Areas 37 (1.5), 42 (1.1), 43 (1.8), 41 (0.7), and 38 (1.3), its peak was only during the 5th month. When it is realized that in these last Areas one Health Area was less than three-quarters of a mile away from the center of original infection, and the furthest only 1.8 miles, it must be rather surprising that it should take so long an interval for the epidemic to reach its acme in these five Areas. I believe it can be fairly said that the usual impression is that when measles does spread over any location, that it does so in a comparatively few weeks, but here in all the Areas, the furthest of which is only 1.8 miles, we are dealing not with weeks but actually with months. If we consider the incubation period of measles as 10 days, there is certainly a long period even in the earliest peaks of 3 months before the epidemic reached its height in adjacent or nearby Areas. Even if we consider 6 months as the usual duration of an epidemic, it is generally not realized that the geographical and time progress of a local epidemic can be so slow, as shown in one comparatively small district such as that of Mott Haven.

As we know that measles is a disease which is spread from person to person,

CHART I. MOTT HAVEN MEASLES EPIDEMIC, NOV. 1940 – APRIL, 1941

SHOWING IN EACH HEALTH AREA THE APPROXIMATE DISTANCE MEASURED IN MILES FROM THE CENTER OF HEALTH AREA 47 TO THE CENTER OF THAT HEALTH AREA AND THE PEAK MONTH OF THE EPIDEMIC IN THAT AREA.



and as it occurs in children mostly under the age of 15 years, and particularly between 5 and 9, it is possible that the geographical and time progress of the disease might be influenced by the degree of contact between children in the different Health Areas of the District. Inasmuch as contact between children of these ages is probably most general in the public and parochial schools, it is very possible that this school contact is an important factor in the explanation of the peculiar spread of the disease and the long interval through which it reached certain parts of the District.

Accordingly, an effort was made to study this factor by obtaining the school boundaries of our various public and parochial schools in the different Health Areas. Based on public school boundaries, it was found that H.A. 46, which had a comparatively early peak, draws pupils from most of H.A. 47 through one school. H.A. 45, which reached its peak a month later than H.A. 46, draws its pupils mostly from its own area except for a few blocks in H.A. 44. H.A. 44, which had an early peak, has a school which draws considerably from the original focus of infection, H.A. 47. It is interesting to note that H.A. 42, which shows one of the last peaks, is served by a public school within its own Area and also by one in H.A. 37 and H.A. 43. H.A. 43, which also had a late peak, draws pupils almost entirely from its own area and a few from H.A. 42 and 37. H.A. 37 draws its pupils wholly from its own Area except for a small part of H.A. 43. It will be seen therefore that these last three Health Areas, that is, 37, 42, and 43, which had the latest peaks, do not draw pupils from other Health Areas beside themselves, with only minor exceptions as indicated. These three Areas are almost entirely self-contained as far as pupil intercontact is concerned. It should also be noted that H.A. 41, which had one of the last peaks, draws no pupils from any

other Area, but sends pupils to 40 and 44, in which latter Areas they come in contact with children from 47. It should be distinctly noted that this Area is only 0.7 miles from Area 47. It has a very late peak, but does not conform to the school picture of the 37, 42, and 43 units. H.A. 38 draws practically all its children from its own Area and again it should be noted that it has one of the last peaks although it is only 1.3 miles distant. A study was made also of the possible influence of parochial school boundaries. These, however, have a tendency to cut across Health Areas so that the findings were not as indicative as those of the public schools. The primary public school registration runs about three times that of the parochial.

A search of the literature on measles failed to yield much on the question of the geographical or time factors of spread of the disease. In the report of the London County Council for 1933[4] on the London epidemic of measles of 1931, there is a reference to the time factor but no detailed discussion. Evidence of the commencement of this epidemic first appeared in the end of October, 1931. During the first week of November the epidemic had established itself in the eastern districts (Stepney and Poplar) and in certain areas of Paddington and Hammersmith. By January, 1932, infection had spread to the northern and northeastern districts and to areas south of the river (Southwark, Bermondsey, and parts of Lambeth, Lewisham, and Woolwich). From this time other areas began to be affected until April, when the whole of London was involved.

The other study was of an epidemic in the St. Pancras section of London in 1926.[5] This section was studied by areas one-half mile square. The disease appeared first in the northeast corner beginning in December. It spread next to adjoining squares, but the peak in Area No. 7, which was only half a mile away from the original source of infection, did not occur until the latter half of March. This Area No. 7 was separated from the original Area by railway barriers. It did not reach an Area two miles away until mid-April. The author comments: "Last of all Districts 7 and 8, which had escaped owing to the peculiar distribution of barriers and absence of sufficient cross-communication were affected by a rim of infectiousness in the latter half of March and beginning of April, respectively."

SUMMARY AND CONCLUSIONS

A measles epidemic starting in the Mott Haven Health Center District (5.58 sq. miles) in its most southerly Health Area in November, 1940, with 69 reported cases, shows no reported cases at that time in another Area 1.5 miles distant and only 1 case in each of a number of other Areas, 0.6, 1.3, 1.1, 1.1, and 1.8 miles distant. An Area adjacent to the initial focus of reported cases and only 0.6 miles distant reported only 4 cases. Even at the end of 2 months, when the original Area of epidemicity had jumped from 69 to a total of 136 cases, a Health Area 1.1 miles distant reported only 6 cases; another Health Area 1.5 miles distant, 4 cases; and another, 1.8 miles distant, only 1 case. It is, therefore, evident that the space progression of the measles epidemic was a slow one.

As far as the time interval is concerned, one Health Area, 0.6 miles distant; another 0.6 miles distant, both adjacent to the initial Area, reached the peak of their reported cases only during the 3rd month. One Health Area, 0.6 miles distant and also adjacent, another Health Area 1.2 miles distant, and a third Health Area, 1.1 miles distant, reached their peaks only during the 4th month. In five Health Areas, distant respectively, 0.6, 1.3, 1.1, 1.5, and 1.8 miles, the peak was reached only during the 5th month. It is therefore evident

that a long interval occurred in the time progression of the measles epidemic, covering a distance of as little as 0.6 miles and 1.8 miles. This lapse of time in the spread of the measles epidemic from the epidemic center had apparently a much longer duration than has been ordinarily realized.

Studies of public and parochial school boundaries and their relationship to the 11 Health Areas in the District show that those Health Areas, which did not send children to schools in Health Areas which already had a high incidence of measles, were generally the last to show peaks of measles incidence in the epidemic, needing 3 to 4 months for the establishments of their peaks.

This slow spread in space and time of the measles epidemic may have a practical value in the possible prophylaxis of measles. If we could time the use of gamma globulin or any future measles preventive on the bases of proper knowledge of time and the geographical progression of measles, better prophylaxis might result.

It is also evident that in this measles epidemic the disease did not spread quickly over adjacent Areas but needed apparently very close person to person contact for a slow propagation and extension.

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Brookings Institution Surveys Medical Care

The Brookings Institution of Washing, D. C., has undertaken "the most comprehensive survey of medical and hospital care ever conducted in this country." Estimated to require two years of effort of a full-time staff of eight persons, it will attempt to study all sources, all distributors — governmental, voluntary, commercial, organized labor, philanthropic, industrial, and other.

The prospectus of the study says: "If we are to have a sound national health program, the first requirement is to ascertain the facts as to the state of medical service in the United States today. For a comprehensive picture of the availability of medical care in the United States, both private and public organizations should be covered. These would include medical services provided by industry, trade unions, medical societies, philanthropic and fraternal organizations, national health associations, group health and other voluntary prepayment plans, state and federal medical aid programs including veterans and the armed forces, and industrial and commercial insurance."

A Practical Method of Securing Data Regarding Services to Mothers and Infants

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A RECENT analysis of the extent of immunization against diphtheria was made in the city of Philadelphia by a fairly simple sampling study. The method used, which appears to be of practical use to health officers, involved the direct interrogation of the mothers of all children in a specific group (defined in this instance as children aged 12 and 13 months) rather than a random sample.

This age group was chosen because: (a) these children have all had a six months' opportunity to be protected by immunization by usual practice, and public health teaching stresses protection by this time, (b) the first birthday is a transition period from infant to preschool life in public health thinking and seems a reasonable time for check-up by public health services with respect to such items, (c) the mothers can still be expected to recall the details involved.

Interrogation was done by (1) mailing a friendly questionnaire with a stamped, addressed return envelope, (2) telephone follow-up, (3) home visit.

In 1948 there were 41,746 resident births in Philadelphia. It was decided that the births occurring in the two months one year previous to the study would provide a significant sample. February and March resident births were used which numbered 6,248 (illegitimate births and deaths removed) which is 15 per cent of the total resident births. The name of the child and the name and address of the mother and the race were obtained by using slips from an existing system whereby the Division of Child Health was notified of all births. It was necessary to go back to the death certificates to check these names against the infant deaths, but this step was considered very important as the names of several hundred deceased babies were removed.

PUBLIC PREPARATION

The project was distinctly a community project. It was specifically authorized by the executive committee of the survey and planned by a technical committee. It was carried on with the knowledge and support of the pediatricians and participation of the health and other social agencies.

A very important part in the success of the undertaking was planned publicity. Announcements with dates were made in the professional magazines. The newspapers carried full stories of what was proposed, immediately before the mailing, and reported the progress with human interest pictures during the first 10 days or so. The radio stations generously provided spot announcements for one week on regularly scheduled programs designed for women listeners. Comparison between a pilot mailing of 100 questionnaires without publicity and the main mailing suggests that these

efforts increased the mailed replies by about 30 per cent.

FOLLOW-UP

Sixty-one per cent of the questionnaires were returned within the first three weeks. The telephone follow-up was then begun. The task of telephoning was undertaken by volunteers through the Council of Volunteers of the Community Chest. Telephone listings were found for about 10 per cent of those sought. The telephoning appeared to increase the returns by about 6 per cent. Home visits were then begun. They were all made by public health nurses provided with duplicate questionnaires. Difficulty with changed addresses was the only serious problem encountered. Obviously the visits did not need to be sterile data-gathering events, but presented excellent opportunities for public health teaching, especially since the questionnaire served to establish good rapport. Particularly important was the chance to learn specifically *why* children were not protected.

RETURNS

Of the 6,248 questionnaires mailed, adequate returns were completed for 5,260, or 84 per cent. Of the 982 parents who could not be located, 695 were white (13.8 per cent of total white questionnaires), and 287 were Negro (24 per cent of total Negro questionnaires). Only 6 parents refused to coöperate. The 5,260 returns completed represent 12.6 per cent of the total 1948 resident births. The accuracy of the study could be increased if information were obtainable from the 982 questionnaires where the family could not be located at the address on the birth record, and efforts to secure a new address were unsuccessful. However, in a period of post-war housing shortage and general unrest, the 982 (16 per cent) not located is not considered excessively high.

A number of studies were made regarding the reliability of the data. Several considerations suggested that the results, particularly in terms of the patterns, are sufficiently reliable for practical use. The group used appeared to be a fair cross-section of the pertinent population. The data obtained were internally consistent. When analyzed by treating each month separately, there was very close agreement between the two months. Tests indicated that the sample was sufficiently large to be significant.

RESULTS

The questionnaire contained six major items with nine sub-questions. They relate to: diphtheria and smallpox protection and their source, source and frequency of prenatal care and of medical supervision of the infant, frequency of public health nursing services to both the mother and infant.

The *net* level of protection against diphtheria—those known to have had two or more doses—was 63 per cent among white children and 41 per cent among Negro children.* Of great importance in planning public health services is the observation of the white children who received this service, 86 per cent received it from their private physicians as compared with only 15 per cent of Negro children. Conversely 58 per cent of Negro children immunized were immunized in health centers and only 8.5 per cent of white children.

The question about smallpox vaccination added very little new information except that the level of vaccination was slightly lower than that of diphtheria immunization.

The pattern seen in diphtheria protection was repeated for medical antepartum services and for medical checkups of infants. Thus, in general, white mothers and their infants received ex-

* The greater prevalence of diphtheria among whites should be taken into account in interpreting these data.

tensive preventive services primarily from their own doctors while Negro mothers and their babies received much less, both in quantity and quality, and the services were provided primarily by health centers and hospitals.

Public health nursing services present a different pattern, which is the result of case selection by the agency, presumably on the basis of need, rather than a choice of the parent. Ninety-one per cent of Negro infants and 76 per cent of white infants were visited by a public health nurse. Nearly half the service was in the first month. More than three nursing visits were uncommon, and in half the families there was only a single visit. Antepartum public health nursing services were much fewer. Only 7 per cent of white mothers and 22 per cent of Negro mothers received such service. Both Negro mothers and infants were visited more frequently and earlier than white families. Further studies regarding the value of single nursing visits could not be completed as part of this project. No correlation was found between the level of immunization and nursing visits.

Data were readily available for separation of the results by race and it quickly became apparent that there were such significant differences that total data were of relatively little use. It is reasonable to suppose however that there might be equally wide variations among any other similarly advantaged and disadvantaged groups. Two studies were made to explore this point.

A group of wards with white population in favorable circumstances were compared with wards of less advantaged white populations and with the total Negro experience, since no wards were found which were exclusively Negro. There was a statistically significant difference in level of protection against diphtheria between the presumed more prosperous white children and the less advantaged. There was no difference between the latter group and the Negro experience.

A partial study was made of those mothers who had received prenatal care by the hospitals and hence were known to have been screened by a means test. The white mothers in this group received three times the public health nursing services of the total white mothers, but their children were significantly less well protected against diphtheria than the total white infants. Half of these children were protected by hospitals in contrast to only 5 per cent of all white children. Another pertinent detail is that, while all these mothers depended on the hospital for prenatal care, 47 per cent of white parents secured immunization and check-ups for the baby from their own doctors. No significant differences were observed between the Negroes in this group and the total Negroes.

The pattern of use of the present facilities of the city can therefore be outlined as follows. The present health centers do not see more than 7 per cent of all white infants and about a third of Negro infants. Hospitals furnish practically all the public prenatal medical services. The hospitals provide about the same amount of medical supervision of infants as the health centers, but they immunize fewer children.

SUMMARY

1. A sampling method is presented for securing essential data regarding such critical indices of public health service as level of immunization and medical and public health nursing services to antepartum mothers and to infants.

2. The method appears to have reasonable and useful reliability, particularly with regard to patterns of practice.

3. In the city studied by this method, white mothers and their infants received extensive preventive medical services, primarily from their own doctors, while Negro mothers and their infants received much less both in quality and quantity,

and it was provided mostly by health centers and hospitals.

4. Securing high levels of the basic preventive services of immunization and medical antepartum care and medical supervision of infants seemed to depend chiefly upon the ability of the people to secure private physicians.

An Educational Program for Iodized Salt

A coöperative educational program to encourage the nutritional use of iodized table salt is being planned by the major producers of table salt with the advice and coöperation of the medical profession, the public health profession, and of government nutrition and health experts. The basis for the educational program is summarized in *Public Health Reports* of August 26, 1949, in an article prepared by William H. Sebrell, M.D., of the National Institutes of Health, Public Health Service, with the approval of the American Medical Association and the American Public Health Association. The article will guide the salt producers in the preparation of educational advertising and publicity materials.

Dr. Sebrell points out that the role of iodine in the prevention of goiter has long been known and that iodized table salt has been available for many years. The present campaign, while stressing goiter prevention, is also pivoted on the results of medical research into the significance of "trace" elements in maintaining general health as well as preventing specific diseases. Such elements as iron, copper, phosphorus, zinc, and others are mentioned which are found in minute quantities in the soil and in plants and animal bodies. According to Dr. Sebrell, normally about 75 milligrams of iodine a year are all that are needed for the proper functioning of the thyroid gland. It is pointed out among other values that in the practice of obstetrics it has been found that the giving of extra iodine has decreased the number of miscarriages and has increased the milk supply of nursing mothers.

It is expected that an announcement will be made of the details of this campaign for which the coöperation of health workers and physicians will be sought.

Use of Mice for the Detection of Small Amounts of Toxin in Cultures of *C. diphtheriae*

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IN 1940 Frobisher and Parsons [1] described the effect in mice of the intracerebral inoculation of strains of *Corynebacterium diphtheriae*. These workers used strains virulent for rabbits and guinea pigs, as well as strains designated as avirulent by tests in these animals. Frobisher and Parsons described characteristic neurological symptoms which could be induced by the intracerebral inoculation of toxin, cultures of virulent strains, and cultures of some avirulent strains. This reaction in mice of strains designated as avirulent by guinea pig or rabbit tests was attributed by Frobisher and Parsons to "the production of minute amounts of toxin which become manifest when elaborated in intimate contact with nervous tissue of the mouse." In 1947 Frobisher, Parsons, and Updyke [2] ascribed the neurological reactions observed in mice inoculated intracerebrally with avirulent strains of *C. diphtheriae* to "specific endotoxins peculiar to the avirulent diphtheria organisms." These workers observed that identical symptoms resulted when sterile filtered *exotoxin* from virulent strains of *C. diphtheriae* was inoculated intracerebrally into mice, but this reaction could be controlled by diphtheria antitoxin whereas the reactions of avirulent strains were not altered by the inoculation of diphtheria antitoxin.

The following experiments were designed to discover if any of a group of avirulent strains of *mitis* type *C. diphtheriae* might be differentiated as toxin-producing by this method. Preliminary tests were performed with strains of *C. diphtheriae* whose virulence had been established by intracutaneous tests in guinea pigs and rabbits. Three of the strains were *gravis* type, four *mitis* type, and three *intermedius* type *C. diphtheriae*. Broth cultures which had been incubated at 37° C. for 48 hours were used. Forty-three unprotected and 42 protected mice (antitoxin administered subcutaneously 24 hours before test inoculations) were inoculated intracerebrally (0.03 ml.) with these broth cultures (Table 1).

Though the series is small, it is apparent that these virulent strains did not affect mice as severely as did the strains reported by Frobisher and Parsons. It also appears evident that mice protected with antitoxin resisted the intracerebral inoculation of these virulent cultures more effectively than the protected mice in the experiments reported by Frobisher and Parsons.

Frobisher and Parsons used various types of *C. diphtheriae* but did not report the reactions by types. When the results in this series are studied according to type, the *gravis* and *mitis* type strains appear to react more severely than the *intermedius* type strains (Table 2). Even though it is recognized that

TABLE 1

Results of Intracerebral Inoculation of Protected and Unprotected Mice with Strains of Virulent C. diphtheriae Compared with Frobisher and Parsons' Data

Virulent Strains	*Antitoxin*	*No. Mice*	*No. Mice Died*	*Ill and Recovered*	*No Symptoms*
B.10[1]	Unprotected	43	30	2	11
F&P.7[2]	Unprotected	48	46	1	1
B.10[1]	Protected	42	7	8	27
F&P.7[2]	Protected	60	26[3]	17	17

[1] B This series.
[2] F&P Frobisher and Parsons' series.
[3] 8 mice died within an hour of injection with convulsive seizures.

TABLE 2

Results of Intracerebral Inoculation of Protected and Unprotected Mice with Mitis, Gravis and Intermedius Type Strains of C. diphtheriae

Strains	*Antitoxin*	*No. Mice*	*Dead*	*Ill and Recovered*	*No Symptoms*
3 Gravis	Unprotected	12	11	0	1
3 Gravis	Protected	12	3	2	7
4 Mitis	Unprotected	16	13	0	3
4 Mitis	Protected	16	1	3	12
3 Intermedius	Unprotected	15	6	2	7
3 Intermedius	Protected	14	3	3	8

TABLE 3

Intracerebral Inoculation of Mice with Avirulent Mitis Type Strains of C. diphtheriae

Strain	*No. Mice Inoc.*	*No. Mice Dead*	*Ill and Recovered*	*No Symptoms*	*Source of Culture*				
1	8	3	0	5	C.C	San Francisco	One Family	Carrier	
2	4	0	0	4	C.C	"	"	"	"
3	8	2	0	6	C.C	"	"	"	"
4	6	0	1	5	O.C	"	"	"	"
5	8	1	1	6	A.C	"	"	"	"
6	6	0	0	6	M.K	Santa Cruz	Private School:	Carriers	
7	6	0	3	3	R.S	"	"	"	"
8	8	2	0	6	J.H	"	"	"	"
9	6	0	0	6	M.F	"	"	"	"
10	6	0	0	6	C.G	"	"	"	"
11	6	1	0	5	F.R	Los Angeles	Unknown Status		
12	8	3	0	5	D.E	Oakland	"	"	
13	6	1	0	5	J.P	Skaggs Springs	"	"	
14	6	5	0	1	A.V	Martinez	"	"	
Total 14	92	18	5	69					

TABLE 4

Reactions in Mice Inoculated Intracerebrally with Avirulent Strains Supplied by Dr. Parsons

Strains	*No. Mice*	*Dead*	*Ill and Recovered*	*No Symptoms*
C.D 107B Avirulent Mitis	6	1	0	5
Lg. 63 Avirulent Mitis	6	0	0	6
My 645 Avirulent Gravis	9	3	2	4

the number of animals in this series is too small for the results to be statistically significant, they are reported here for the interest of other workers.

Frobisher and Parsons [1] reported that 13 strains of avirulent *C. diphtheriae* (type not stated), inoculated into 18 mice, killed 8 mice, produced characteristic symptoms in 9 mice which recovered, and did not affect one mouse. In another experiment they inoculated 68 mice with 12 of the 13 strains previously tested. Twenty-five of these mice died (12 within 18 hours) and "most of the remainder showed symptoms but survived."

Fourteen strains of avirulent *mitis* type *C. diphtheriae* were inoculated intracerebrally into 92 mice (Table 3). Four strains (2–6–9–10) failed to affect any one of 22 mice inoculated. Three of these strains (6–9–10) were from carriers in a school group. Only three strains (1–12–14) killed more than 2 mice each, and two strains (4–7) produced symptoms but not death in 4 of 12 mice. It is apparent that the avirulent strains in this series did not affect mice as severely as did those reported by Frobisher and Parsons. However, all these strains were *mitis* type *C. diphtheriae* which may account for the differences observed.

Dr. Parsons kindly supplied two strains of avirulent *mitis* and one of avirulent *gravis* type *C. diphtheriae* which had been used in the series reported by Frobisher and Parsons.[1] The reactions of these strains when inoculated intracerebrally into mice are recorded in Table 4. These avirulent *mitis* type strains of *C. diphtheriae* reacted as did most of the strains in this series (Table 3). The strain of avirulent *gravis* type *C. diphtheriae* reacted more severely than the majority of avirulent *mitis* type strains from either source.

SUMMARY AND CONCLUSIONS

Virulent and avirulent strains of *C. diphtheriae* were inoculated intracerebrally into mice. Some animals presented symptoms similar to those described by Frobisher and Parsons as characteristic of *C. diphtheriae* toxin in contact with nervous tissue of the mouse. The number of animals used in this study was too small to yield valid conclusions as to the toxin-producing capacity of any strain, virulent or avirulent. The strains of *C. diphtheriae* used in these experiments affected fewer mice than those reported by Frobisher and Parsons. Many strains of virulent and avirulent *C. diphtheriae* of various types should be tested in large numbers of unprotected and antitoxin-protected mice so that standards of measurement of toxin-producing capacity of the so-called "avirulent" strain of *C. diphtheriae* may be established.

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NOTE: The technical assistance of Margaret Garland and Virginia Dittmar, senior students in the School of Public Health, is gratefully acknowledged.

Occurrence and Distribution of Types of *C. diphtheriae*

California, July 1, 1940–June 30, 1948

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THE classical description of *mitis* and *gravis* types of *Corynebacterium diphtheriae* presented by McLeod [1] and his coworkers (Anderson, Happhold, Thompson) in 1931 and subsequently of the *intermedius* type [2] in 1933, presented a challenge to all public health bacteriologists. The severity of the disease due to the *gravis* type in Great Britain and Germany (1932–40) created interest and concern in regard to the current distribution of types in any area.

In 1943, McLeod [3] reviewed the studies of type which had been made in the intervening 10 year period, and concluded that there were only three areas—Central Europe, Great Britain, and Australia—"in which the quality and amount of work done is sufficient to give a fairly clear idea of the actual type distribution." For the United States, McLeod reported the amount of work done as very limited, and concluded that the studies reviewed "suggest that *gravis* diphtheria as it has occurred in Europe has not yet been observed in the U.S.A." No additional reports of studies on the occurrence of types of *C. diphtheriae* in this country have been found in reports published since those included in McLeod's review. The epidemics of diphtheria in Europe during and since the war have focused the attention of public health workers upon diphtheria and the several unsolved bacteriological, clinical and epidemiological problems which it presents.

This investigation was initiated in 1938 and was designed to study the occurrence and distribution of types of *C. diphtheriae* in California. The importation of the *gravis* type from Europe was considered a possibility, and a knowledge of the types currently present in the state seemed desirable. During the first two years the number of specimens studied was small and many were not properly identified. During this time the techniques of typing were tested and improved. These preliminary studies showed that all three types were present in California and that the *gravis* and *intermedius* types were most frequently found in cultures from cases in the southern part of the state.

Beginning in 1940, cultures were solicited from all public health laboratories in the state, but the threat of war in 1941, and the advent of war in 1942, disrupted the arrangements which had been made for the transmission of specimens so that the number received in the first four years was less than had been anticipated. The laboratories of the State Department of Public Health serve the rural areas of the state where laboratory facilities are not present locally. Through the coöperation of the Division of Laboratories of the State Department of Public Health, most of the cultures received from such areas were made available. At all times the

TABLE 1

Types of C. diphtheriae Isolated from Individuals in California July 1, 1940–June 30, 1948

Type of C. Diphtheriae	Individuals from Whom C. diphtheriae Was Isolated					
	Total		Cases		Carriers or Unknown Status	
	No.	%	No.	%	No.	%
Total of all types	2,068	100	1,231	100	837	100
Mitis	1,221	59	690	56	531	63
Gravis	696	34	435	35	261	31
Intermedius	151	7	106	9	45	6

TABLE 2

Reported Cases of Diphtheria in California for Which Type Was Determined, Distributed by Areas, July 1, 1940 to June 30, 1948

Area	Total Cases Reported in Counties from Which Cultures Were Received[5]	Cases from Which Strains Were Typed	
		No.	%
Total	6,023	1,231	20
Northern Counties[1]	1,016	219	21
Central Coast Counties[2]	1,091	387	35
Central Valley Counties[3]	1,023	164	16
Southern Counties[4]	2,893	461	16

[1] Amador, Butte, Calaveras, Colusa, Humbolt, Lake, Lassen, Mendocino, Modoc, Napa, Nevada, Placer, Sacramento, Shasta, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Tuolomne, Yolo, Yuba.

[2] Alameda, Contra Costa, Marin, Monterey, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz.

[3] Fresno, Inyo, Kern, King, Madera, Merced, San Joaquin, Tulare.

[4] Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Ventura.

[5] Cases not included for year in which no cultures received from any county in area.

number and source of specimens submitted were determined by the coöperation of the bacteriologists in public health laboratories and the proximity of some of these laboratories to the School of Public Health. At no time was any deliberate process of selection of samples introduced.

From July 1, 1940, to June 30, 1948 (Table 1), the type was determined for 2,068 cultures of *C. diphtheriae* isolated from 2,068 persons. Of these, 1,231 (60 per cent) were from persons reported as cases of diphtheria and 837 (40 per cent) from carriers or persons whose status was unknown. Of these 2,068 persons, 1,221 (59 per cent) were found to harbor *mitis* type, 696 (34 per cent) *gravis* type, and 151 (7 per cent) *intermedius* type. From the 1,231 persons reported as cases of diphtheria, *mitis* type strains were isolated from 690 (56 per cent), *gravis* from 435 (35 per cent), and *intermedius* from 106 (9 per cent). From the 837 carriers or persons whose status was unknown, *mitis* type strains were isolated from 531 (63 per cent), *gravis* from 261 (31 per cent), and *intermedius* from 45 (6 per cent). The percentage of the reported cases of diphtheria for which the type was determined is shown by areas in Table 2. In the 8 year period the type was determined for 20 per cent of reported cases. The proportion of cases for which the type was determined was greater in the Northern and the Central Coast areas (21 per cent and 35 per cent) than in the Southern or the Central Valley areas (16 per cent each). It is recognized that the populations of these four areas are not comparable, since approximately 50 per cent of the state's population was concentrated in

Southern California according to estimates for July 1, 1944. The results (Table 3) show that *mitis* type *C. diphtheriae* was the type isolated most frequently from cases, carriers, and persons of unknown status throughout the state; that the *gravis* type occurred more frequently in the Southern and Central Valley areas than in the Northern or Central Coast areas, and that the *intermedius* type was found most frequently in the Central Valley area.

The distribution of *gravis* diphtheria is of interest particularly as it occurred in three metropolitan areas (Table 4). A comparatively high proportion of the *gravis* type was observed in cultures from Los Angeles County during the 8 year period, as had been suggested by the preliminary studies. For the first 4 years, the type was determined for only 86 (7 per cent) of reported cases but 43 (50 per cent) of these 86 cases yielded *gravis* type *C. diphtheriae*. In

TABLE 3

Types of C. diphtheriae in California from Individuals[5] Distributed by Areas

Area	Individuals[5] from Whom Strains Were Typed		Types of C. diphtheriae					
			Mitis		Gravis		Intermedius	
	No.	%	No.	%	No.	%	No.	%
Total	2,068	100	1,221	59	696	34	151	7
Northern Counties[1]	373	18	261	70	98	26	14	4
Central Coast Counties[2]	634	31	449	71	138	22	47	7
Central Valley Counties[3]	245	12	125	51	72	29	48	20
Southern Counties[4]	816	39	386	47	388	48	42	5

[1] Amador, Butte, Calaveros, Colusa, Humbolt, Lake, Lassen, Mendocino, Modoc, Napa, Nevada, Placer, Sacramento, Shasta, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Tuolomne, Yolo, Yuba.
[2] Alameda, Contra Costa, Marin, Monterey, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz.
[3] Fresno, Inyo, Kern, King, Madera, Merced, San Joaquin, Tulare.
[4] Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Ventura.
[5] Cases, carriers, and persons of unknown status.

TABLE 4

Gravis Type C. diphtheriae, Isolated from Cases Reported to the California State Department of Public Health from Selected Metropolitan Areas July 1, 1940–June 30, 1948

Location and Period	Number of Cases Reported	Cases for Which Type Was Determined		Gravis Type C. diphtheriae Isolated	
		No.	%	No.	% of Cases Typed
California					
1940–1948	6,023	1,231	20	435	35
1940–1944	2,719	289	10	81	28
1944–1948	3,304	942	28	354	38
Los Angeles County					
1940–1948	2,361	420	18	214	51
1940–1944	1,168	86	7	43	50
1944–1948	1,193	334	28	171	51
San Francisco County					
1940–1948	308	124	40	6	5.0
1940–1944	106	9	8	0	0
1944–1948	202	115	56	6	5.0
East Bay Counties					
1940–1948	511	188	36	58	31
1940–1944	230	28	12	4	14
1944–1948	281	160	57	54	34

the last 4 years the type was determined for 334 (28 per cent) of reported cases, and 171 (51 per cent) of these cases yielded the *gravis* type. It seems evident that during the 8 year period at least 50 per cent of reported cases in this area were *gravis* diphtheria.

In San Francisco, another metropolitan area, the type was determined for 124 (40 per cent) of the cases in the 8 year period, 9 (8 per cent) in the first 4 years, and 115 (56 per cent) in the last 4 years. No *gravis* type strains were found in the first 4 years (the sample was very small); and only 6 (5.0 per cent) cases yielded the *gravis* type in the last 4 years when the type was determined for 56 per cent of reported cases. It would be difficult to explain this discrepancy at any time but doubly so when the movement of people to and from the ports and between these areas of wartime industrial production was constant during the war years. This failure of *gravis* diphtheria to spread from Los Angeles to San Francisco might be considered a matter of distance and chance, but the occurrence of *gravis* diphtheria in 58 (31 per cent) of 188 cases reported in Alameda and Contra Costa countries, across San Francisco Bay, certainly cannot be explained as due to distance or chance. From 1940 to 1948 there were 511 cases of diptheria reported in these East Bay counties for which the type was determined in 188 (36 per cent), while at the same time 308 cases were reported in San Francisco City and County for which the type was determined in 124 (40 per cent) cases. In the first 4 years (1940–1944) the type was determined for only 28 cases in the East Bay, but no *gravis* type strains were isolated from cases until 1942–1944. In the last 4 years the type was determined for 160 cases of which 54 (34 per cent) were *gravis*. No explanation of this failure of the *gravis* type to spread from Los Angeles County or the nearby East Bay counties to San Francisco can be offered.

The high proportion (Table 3) of *gravis* type *C. diphtheriae* in the persons residing in the northern counties is of considerable interest. In the first year of the study, cultures from 22 persons living in a small village in Calaveras County yielded *gravis* type strains of *C. diphtheriae* (12 reported cases). No *gravis* type strains were isolated from cultures received from this county in the subsequent 7 years. *Gravis* type strains were isolated from 25 cases and carriers in Butte County (another northern county) 1942–1948. In two small adjoining northern counties, Sutter and Yuba, strains of *gravis* type *C. diphtheriae* were isolated from cultures from 21 reported cases in an Agricultural Workers Camp during a 2 year period (1946–1948). The remaining cases from which *gravis* type strains were isolated were distributed in various counties in this northern area in the 8 year period.

Ninety (60 per cent) of the 151 *intermedius* type strains were isolated from cultures from persons in the Southern and Central Valley areas (Table 3). Of the 47 persons in the Central Coast area from whom *intermedius* type strains were isolated, 37 were found in a 2 year period (1944–1946). Thirty-two of these occurred in three counties—16 in one, and 8 in each of the other two counties. Twenty-nine of these 32 persons were reported as cases of diphtheria. The remaining *intermedius* type strains were isolated from cases or carriers in other areas and years.

SUMMARY AND CONCLUSIONS

Mitis type *C. diphtheriae* was the type most frequently found in cultures from cases, carriers, and persons of unknown status in all areas from which cultures were received. *Gravis* type *C. diphtheriae* was isolated from 35 per cent of the

reported cases from which strains were isolated. The percentage of isolations of the *gravis* type varied from 48 per cent in the Southern area to 22 per cent in the Coast Central area. In Los Angeles County, 51 per cent of the reported cases yielded *gravis* type *C. diphtheriae*. No explanation can be offered for the occurrence of *gravis* diphtheria in 31 per cent of the cases in the East Bay counties when only 5.0 per cent of cases in San Francisco County yielded *gravis* type strains. The *intermedius* type was found in the Southern and Central Valley areas throughout the period. Small outbreaks of diphtheria due to the *intermedius* type occurred in 1944–1946 in three counties in the Central Coast area.

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NOTE: The technical assistance and enthusiastic coöperation of more than forty graduate and undergraduate students is gratefully acknowledged.

Senate Passes Health Units Act

Without a dissenting vote, the U. S. Senate on August 27 passed the local health units bill, S 522. This provides for federal grants-in-aid for the development of local health departments. The formula for federal reimbursement is based on population and need. In order to prevent piecemeal development, there must be a plan for complete coverage of the state acceptable to the Surgeon General of the U. S. Public Health Service, who also has authority to set standards of personnel, minimum population to be served by a department, activities to be carried on, etc.

Under the act, services for which federal funds may be used "may include services dealing with the diagnosis and prevention of disease, the control of communicable disease, health education, demonstrations, sanitation, vital statistics, the training of personnel for state and local public health work, and other aspects of preventive medicine, but shall not include medical, dental, or nursing care, except in the diagnosis or prevention of disease or the control of communicable disease, or the promotion, establishment, or maintenance of industrial accident prevention programs."

Use of Egg Embryos in the Culture of Mycobacterium Tuberculosis*

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THE usual methods of establishing the presence of the tubercle bacillus in pathological material require several weeks for completion, unless direct microscopic examination is successful and adequate. With the use of streptomycin for treatment, it is desirable to secure earlier diagnosis and hasten the establishment of the level of sensitivity of the strain isolated from the case under treatment.

Pryce [1] has reported on certain microculture techniques, and Dubos [2, 3] has developed an excellent liquid medium which permits growth in a few days. Costil and Bloch [4] have studied the lesions produced on the chorioallantoic membranes of embryonated eggs. It would be very desirable to have a rapid method of growing Mycobacteria which would provide a means of differentiating the pathogens from non-pathogens. This cannot be achieved by the liquid media mentioned above and it was decided to investigate the use of egg embryos.

Materials and Methods

Through the courtesy of Dr. H. C. Boughton, Medical Superintendent of the Sanatorium, Saskatoon, specimens of sputa from patients in that institution were received for culture. These were taken from patients in various stages of treatment or from recent admissions.

The specimens were concentrated using either the acid or trisodium phosphate [5] procedures, although the latter was later discarded.

The fertile eggs were secured from a local chicken farm and incubated at 37° C. for the required period and candled before use.

Petragnani's, Woolley's, Löwenstein's media, and Löwenstein's medium with silica egg slant media, were prepared in the usual manner and were less than 2 weeks old when used. Dubos medium was prepared according to the method of Dubos, *et al.*[3]

A special room was available for this work and, prior to use, the air was changed by fan and irradiated with two sterilaire lamps. The technicians wore gowns, masks, and gloves which were sterile at the beginning of each inoculating period. Later work indicates that these precautions are not necessary for control of casual infection of media, but only for safety of the workers. Contaminated embryos were extremely rare and did not constitute a problem.

INOCULATION

1. *Chorioallantoic membrane*—Ten to 12 day old embryos were selected and candled. The site of the embryo and the air sac were marked on the shell, and the areas sterilized with alcohol. Selecting a site over the embryo, a small window of about one sq. cm. was cut in the shell with a dentist's drill. The shell membrane was stripped with sterile forceps, and the inoculum introduced

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onto the chorioallantoic membrane by means of a sterile plugged capillary pipette. The area surrounding the opening was then coated with sterile gelatin in phenol, and sealed with sterile cellophane. The air sac opening was then sealed with sterile paraffin, and the eggs were incubated at 37° C. for from 6 to 8 days.

2. *Yolk Sac*—Seven to 10 day old embryos were selected and candled. An ordinary plastic household container was used to hold twelve eggs. These were placed with the air sac uppermost and with the marked embryo to the left hand side. The area over the air sac was sterilized with iodine, a hole was bored with a sterile punch, and the edges of the hole were swabbed again with a sterile swab dipped in iodine. Introduction of the inoculum was made with a plugged sterile capillary pipette into the yolk sac. The hole was then sealed with sterile paraffin. Incubation was at 37° C. for from 6 to 8 days.

3. *Dubos Medium and Egg Slants*—The inoculation of these media was made by the usual methods, using plugged sterile capillary pipettes.

Trays containing all necessary instruments and media were prepared beforehand and all inoculations of one specimen were made at the same time. The average length of time taken by two technicians working as a team to inoculate three chorioallantoic membranes, three egg yolks, Dubos medium and Petragnani's and Woolley's medium, was five minutes.

Inoculation Trays — Holding trays were so constructed that eggs could be held either lying on one side in the case of membrane inoculations or with the air sac uppermost for yolk inoculations.[6]

EXAMINATION OF EGG EMBRYOS

1. *Chorioallantoic Membranes*—Membranes were inspected from day to day and typical lesions were noted. After 6 to 8 days they were opened in the sterile room with sterile precautions. Smears were made from each membrane showing typical lesions and each membrane was then transferred to a sterile test tube containing sterile normal saline. They were held thus until the smears had been examined. Smears were stained by the cold Ziehl-Neelson technique. Membranes with lesions containing typical acid-fast bacilli were retained for animal inoculations.

2. *Yolk Sac*—The paraffin over the air sac was melted with a heated sterile probe and sufficient of the contents of the yolk sac was withdrawn with a sterile capillary pipette to make a smear from each yolk. The area over the air sac was then re-sterilized with iodine and re-sealed with sterile paraffin and the eggs were held until smears had been examined. After the examination of smears, the most suitable eggs were retained, and after the shell had been sterilized, the yolk sac was separated and held in a sterile Petri dish. A portion of the yolk sac was then transferred to a sterile test tube containing sterile normal saline. The material was held thus until used for animal inoculation.

3. *Dubos Medium* — Dubos medium was made up as shown above and was dispensed in 5 ml. quantities in screw capped vials. Two or three drops of inoculum were introduced by means of a plugged sterile capillary pipette. Cultures were inspected daily for turbidity and smears were made as soon as cloudiness was observed. In some cases turbidity was so marked as to render the medium almost opaque. Negative cultures were held up to 48 days. Positive cultures were obtained after repeated negative examinations in one case after a period of 32 days.

4. *Petragnani's and Woolley's Media* —These cultures were inspected from day to day and a record was kept of the number of days required for growth to

appear. Negative cultures were held for 60 days.

GUINEA PIG INOCULATIONS FOR PATHOGENICITY

Young, healthy, male guinea pigs of an average weight of 300 gm. were selected. Only tuberculin-negative animals were used. Since all specimens were secured from tuberculous patients at various stages of treatment, no effort was made to inoculate animals with the original specimen. Animals were injected intraperitoneally with a mixture of 0.5 ml. egg sac suspension and 0.5 ml. of membrane suspension. They were then placed in individual cages, and identified by numbered ear tags. Where death had not occurred after a period of 30 days, a second tuberculin test was given. If a positive result was obtained, the animal was killed and autopsied. Careful notation was made of all infected organs, and smears were made of each organ involved for verification of the presence of typical acid-fast bacilli.

PRELIMINARY INVESTIGATION

A series of one hundred samples was used in a preliminary investigation of the sensitivity of the membrane cultures as compared with egg slant cultures. These specimens were cultured on the chorioallantoic membrane of 10 to 12 day old egg embryos, and on four egg slant cultures, namely, Petragnani's, Woolley's, Löwenstein's, and Löwenstein's with silica.

The results of this preliminary investigation are shown in Table 1.

TABLE 1

Positive membrane and positive cultures	71
Negative membrane and negative cultures	14
Positive membrane and negative cultures	12
Negative membrane and positive cultures	3
Total specimens	100

These results indicated that the use of embryonated eggs was promising and might be as sensitive as the usual culturing procedures. Since positive results were secured in 4 to 7 days, this method would shorten the period required for laboratory identifications.

A further study was planned in which the chorioallantois and yolk sac of embryonated eggs—three eggs for each—Dubos medium, Petragnani's and Woolley's egg media, were inoculated after the usual concentration. Only the two egg media were used in this study because these two gave the best results in the first series, and it appeared unnecessary to extend unduly the comparison of media. The yolk sac inoculations were added because in a few cases in the first series the abnormal appearance of the yolk sac resulted in the identification of acid-fast organisms in the yolk. In these cases the embryo was always dead.

All positive egg embryos, membrane or yolk sac, were inoculated into guinea pigs in order to establish that the organism causing the lesion, or growth in the yolk sac was due to a pathogenic acid-fast organism, and not to some saprophyte present in the specimen or introduced during handling. Remarkably uniform results were obtained as shown in Table 2.

TABLE 2

Comparison of Results Secured from Egg Embryos, Egg Cultures, and Animal Inoculations

Number in which all cultures and all animals were positive	82
Number in which all cultures were negative (no animal inoculation)	12
Negative animals with positive cultures	3
Number with negative egg sac, all others positive	2
Number of animals died of intercurrent infection	1
Total	100

A more detailed study was made of the final twenty-five specimens used in the above series. A separate animal was inoculated whenever any of the following were positive:

a. Chorioallantoic membrane
b. Yolk sac
c. Dubos medium
d. Petragnani's and Woolley's medium

Of the twenty-five specimens examined in this way, three were negative on all cultures, while twenty-two were positive on all media. Four animals were inoculated for each of the latter specimens.

NON-PATHOGENS AND ATYPICAL ACID-FAST ORGANISMS

Cultures of *Mycobacterium avium, M. smegmatis, M. butyricum, M. lactiola, M. fortuitus, M. marinum* and *M. phlei* were secured from the American Type Culture collection. *M. smegmatis* produces a lesion at 37° C. in four days, which is markedly different from those produced by *M. hominis* and *M. bovis* in that it is wrinkled and reddish giving a granular and concentric appearance. *M. fortuitus* also produced a lesion in 5 days which was very shiny, raised, and had a slight brownish cast, quite different from the human pathogens. The other organisms did not give lesions on the chorioallantoic membrane.

One atypical acid-fast culture was secured from a gastric lavage in our own laboratories and thirty-two atypical strains from sputa or gastric washings or urine were kindly supplied by the Division of Laboratories, Ontario Department of Health. All of these showed no growth on the chorioallantoic membrane in 10 to 12 days at 37° C. Only one, isolated from a urine specimen, was found to give lesions on animal inoculation (personal communication) and the trial on egg embryo was not satisfactory as the original culture was apparently dead on arrival. A further series of atypical forms from the same source is being investigated and different temperatures of incubation will be tried as it has been found that *M. avium* will produce excellent lesions when incubation is at 42° C.

DISCUSSION

Examination of the results reported above indicates that the use of egg embryo culture methods is fully as sensitive as the conventional egg slant cultures. This is true of both the chorioallantoic membrane and the yolk sac inoculations. While the latter method is simpler to carry out, it suffers from the same defect as other liquid culture media, namely, that there is no colony or lesion that can be evaluated as to type.[7] Larger inocula into the yolk sac usually kill the embryo, but this rarely happens with membrane inoculations, where apparently healthy chicks may develop from inoculated eggs.

It was interesting to note that, where four guinea pigs were inoculated from the various media used with the same specimen, the time of death and extent of involvement of the organs were almost identical. One specimen produced a tuberculous peritonitis in all animals, with death resulting in 9, 10, 11, and 12 days respectively.

These results provide good additional evidence that this was the same organism present in the original specimen, and that casual infection of cultures by acid-fast bacilli was at a minimum.

The time involved in planting specimens is not unduly long for a possible routine procedure. Five minutes was required for a team of two workers to inoculate three eggs by membrane and three more by yolk sac, Dubos broth and two egg slants. If only egg membranes were being inoculated, much larger numbers of concentrated specimens could be inoculated per unit of time. In two cases the lesions on the chorioallantoic membrane appeared atypical and in one case the bacilli in Dubos medium appeared atypical.

It is interesting to note again that in four cases where the lesions were typical but no acid-fast organisms could be established, the animal inoculation resulted in a typical tuberculous involve-

ment of the organs, with morphologically typical acid-fast organisms present.

While a detailed study has not been completed of the lesion produced by typical, atypical, and non-virulent acid-fast bacilli, present indications are that it may be possible to identify typical strains. Certainly, this is a convenient method for primary enrichment prior to the inoculation of animals.

SUMMARY

The culturing of the tubercle bacillus in embryonated eggs is possible as a routine procedure. Inoculations on the chorioallantoic membrane have the advantage that lesions are evident and capable of evaluation as to type. It is a convenient method for enrichment prior to animal inoculation. Further studies are being undertaken in relation to the type of lesion found in typical, atypical, and nonvirulent strains of acid-fast organisms and the appearance or disappearance of organisms from the lesions.

ACKNOWLEDGMENTS—Our appreciation is expressed to Dr. H. C. Boughton, Medical Superintendent of the Saskatoon Sanitarium, and Dr. E. L. Barton, Director of the Division of Laboratories, Ontario Department of Health, for their kindness in supplying specimens. Without this assistance it would not have been possible to undertake this investigation.

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Take a Test

The Merit System Service booth at the American Public Health Association annual meeting in Boston attracted considerable attention with its "TAKE A TEST" exhibit. This consisted of six short sample tests, designed to illustrate the type of service being offered by the Merit System Service and to show how public health information, experience, and judgment can be measured by objective examinations.

The exhibit was repeated at the Western Branch meeting of the American Public Health Association in Los Angeles, Calif., May 30 to June 1.

The results for the Boston meeting are available in an attractively bound report which contains copies of the six sample tests, an answer key, an analysis of the scores of the persons tested, and an analysis of the items themselves. The latter illustrates the method which is used to evaluate the effectiveness of individual questions. The report may be obtained by writing to the Merit System Service, American Public Health Association, 1790 Broadway, New York 19, N. Y. $1.00.

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THE HOSPITAL SURVEY AND CONSTRUCTION PROGRAM

ONE of the most important pieces of health legislation ever enacted in this country was the Hospital Survey and Construction Act passed by the 79th Congress in 1946. This law provided grants-in-aid at the rate of $75,000,000 a year for construction of hospitals and health centers, after an intensive study of local needs, and on a matching basis which takes into account the population and the per capita income of each state. Dr. V. M. Hoge, Assistant Surgeon of the U. S. Public Health Service, has recently reported,[1] the completion of surveys and preparation of plans in all states but Delaware. At the present writing it seems certain that this admirable program will be continued, and on an enlarged scale.

The necessary provision of hospital beds is estimated by the Service as follows: for general hospital beds, 4.5–5.5 beds per 1,000 population (depending on the density of the population); for mental hospital beds, 5 beds per 1,000 population; for the care of chronic disease, 2 per 1,000 population; for tuberculosis, 2.5 beds per annual death from this disease.

It will be a surprise to many of us, who have been told that the health of the American people is adequately cared for, to find how far short of such ideals is our present provision of hospital facilities. In contrast with the desirable figures indicated above, here is the actual situation for the continental United States.

Bed Capacity	*Estimated Need*	*Mean for All States*	*Lowest States*	*Highest States*
General hospitals, per 1,000	4.5–5.5	2.8	1.7 (Miss.)	4.7 (Mont.)
Mental hospitals, per 1,000	5	2.8	1.2 (Ark., Mich., Iowa)	5.5 (Vt.)
Chronic hospitals, per 1,000	2	0.2	0 (Many states)	2.0 (Wash.)
Tuberculosis hospitals, per annual death	2.5	1.2	0.4 (Ala.)	2.9 (Conn.)

Even Montana needs 727 more beds in general hospitals. Vermont is the only state which has enough beds in mental hospitals. Washington is the only state which has sufficient beds for chronic cases. Connecticut, Minnesota, and North Dakota are the only states with 2.5 sanatorium beds per annual death from tuberculosis. The survey reveals a total unmet need (in the continental United States) for 255,000

more general hospital beds, 310,000 more mental hospital beds, 248,000 more beds for chronic disease, and 82,000 more beds for tuberculosis.

The problem is, however, more than a purely quantitative one. A most significant element in the federal program is the planning which it involves for intimate relationship of small hospitals in rural areas to the larger institutions which form necessary centers for maintenance of high standards of medical protection. The hospitals to be enlarged or created, are of three kinds—Base Hospitals, Intermediate Hospitals, and Rural Hospitals; and it is expected that informal but effective contacts may be developed between hospitals of these three grades so that the vast possibilities of modern medical science may actually be made available to the remote and economically undeveloped areas which have in the past wofully lacked such facilities.

Furthermore, it is a point of major importance to the health officer that this program provides assistance—not only for hospitals—but also for public health centers, in a ratio up to one center for a population of 20,000–30,000. Such centers may include laboratories, public health clinics, and health department headquarters. Nothing could be of greater value in uniting the medical practitioner and the health worker in their common task than the development of such health centers in connection with general hospital and clinic facilities.

It is gratifying to note that up to May 13, 1949, 792 applications for construction projects under the Hospital Survey and Construction Act had received approval. They involve a total sum of $483,000,000, to which the federal grants-in-aid will contribute $149,000,000, or slightly less than one-third.

REFERENCE

1. *Pub. Health Rep.* 64:991 (Aug. 12), 1949.

INDIAN MASSACRE — NEW STYLE

THE term "Indian Massacre" suggests to our minds a horde of whooping red men descending on a frontier settlement and scalping women and children.

An article by Dr. F. T. Foard, in this issue of the *Journal* suggests a very different meaning of the term.

When we read that 250 full-time physicians are necessary for adequate care of these wards of the government, while only 83 are actually employed; that only 50 out of 83 field nursing service positions are filled; that only one sanitary engineer devotes his full time to the public health work of the Bureau of Indian Affairs; that no pediatricians or nutritionists have ever been employed for field service among the Indians; that the mortality among the Indians is nine times that of the Whites for tuberculosis, more than five times that of the Whites for pneumonia, ten to twenty times that of the Whites for diarrhea and enteritis, we wonder if the shoe is not on the other foot. The "Indian Massacre" of today is the massacre of the Indian wards of the federal government, due to neglect to an extent which is truly "a disgrace to the nation."

Dr. Foard suggests certain administrative reforms which would somewhat improve the situation. He outlines, however—as a better alternative—the more radical policy of decentralizing the entire health service for Indians to the state governments directly concerned, with grants-in-aid from Washington to cover the cost, made available on a plan approved each year by the appropriate federal authority.

We believe this to be an admirable suggestion; and urge its serious consideration by all friends of the Indian and of the cause of public health.

A POWERFUL WEAPON FOR THE HEALTH ADMINISTRATOR

THE decision of a federal court in Baltimore, noted in an earlier issue of this *Journal*,[1] is of major importance in strengthening the power of the health department to enforce sanitary requirements. Unless this decision is reversed by the Supreme Court, it sets a precedent which has far-reaching implications.

The case concerned the death from endemic typhus of a tenant in a Baltimore defense housing project; and the court — acting on a suit brought by the State of Maryland on behalf of the widow — assessed damages against a real estate company, as operator, and the United States Government, as owner of the property.

Evidence in this case was extraordinarily complete. Wooden floors of the cellars were honeycombed with rat burrows and the garbage from the apartments frequently overflowed the dilapidated, uncovered containers provided by the landlords. The Baltimore Health Department warned the Federal Agency of these conditions in March, 1944; but could do no more at that time, since the project was then operated by the federal government. It was 1946 before any attempt was made at remedial action and then in so haphazard a fashion that rats still found harborage in the floors and walls. In January, 1947, the F.H.A. sub-leased the premises to the company in question; and the City Health Department, which, under these circumstances had full authority, cleaned up the situation with promptness and despatch. Prior to 1947, however, 6 cases of typhus had occurred, including the fatality which was the basis of the suit under discussion.

Such complex problems of legal responsibility could not occur under normal federal housing procedures (outside of war emergencies). In the normal operation of the Housing Act, unsubsidized housing is operated by private parties with financial aid from Washington; and low-rent, directly subsidized housing is operated by local Housing Authorities, under contract with the F.P.H.A. The precedent set is, however, applicable to the whole program of sanitary control of housing conditions. It is rare that so complete a case can be made out against a particular landlord; but the example of what occurred in Baltimore should prove a powerful weapon in securing compliance with all housing regulations.

It would be wise for health officers to report this case in their weekly or monthly bulletins as a warning of what may happen elsewhere.

REFERENCE

1. Court Holds United States Responsible in Typhus Death. News from the Field, *A.J.P.H.* 39, 10:1379 (Oct.), 1949.

FEDERAL AND STATE RESPONSIBILITY FOR PUBLIC HEALTH

IT happens that the editorial columns of this *Journal*, for the present and preceding month, have — by coincidence — dealt with four different problems which involve federal and state responsibility for public health. In October, we discussed the U. S. Public Health Service grants for local health work; and in the present issue, the parallel program for development of hospital and health center facilities.

In both these instances, the coöperation of federal and state agencies has been notably successful.

In immediately preceding editorials, we have noted the regrettable sanitary lapses in Federal Housing Agency management of a Baltimore housing project and the far more serious failure of the federal government in providing health protection for its Indian wards. The Baltimore case involved only the errors of a minor administrative agent, while the neglect of the health of the Indians is a far more basic evil. Yet they both suggest dangers inherent in long-range administration by the federal government of programs which are essentially local in nature. Such failures provide powerful arguments to those who oppose any national leadership in the health and medical fields; and who assume that the only alternative to local inadequacy is centralized dictation.

It appears, however, that the first two instances cited above suggest a far better solution of the problem than either *laissez-faire* or regimentation. The lapse at Baltimore and the failure of the Indian medical service were due to the attempt to administer from Washington what was essentially a local program, without intimate day-by-day knowledge of its operation and without the salutary controls of local public opinion. The U. S. Public Health Service programs of grants-in-aid have been successful because they have been conducted throughout by state and local health authorities, but with the oversight of the federal authorities as a guide to general policy. In such a partnership, soundness of program-making is provided by broad principles laid down in Washington, soundness of execution by the control of actual administration at the state level.

In the application of this sort of coöperation, based on the democratic principle of checks and balances, may lie the solution of many of our future problems of public health and medical care.

LETTER TO THE EDITOR

To the Editor:

On page 892 of the July *Journal* there is an item about Health of San Francisco Chinese—20,000 of them "who make up the largest Chinese population in the United States."

The Territory of Hawaii, by Act of Congress, is a part of the United States, and the Chinese population in the Territory totals 31,000.

By way of comparison, the selected rates, as enumerated in the news item, are listed below for All Races and for Chinese, Territory of Hawaii, 1948.

	All Races	*Chinese*
Pulmonary tuberculosis	29.2	32.7
Suicide	9.6	3.3
Infant Mortality	28.7	19.6

M. A. Taff, Jr., *Chief*
Bureau of Health Statistics,
Department of Health,
Territory of Hawaii

Clearing House on Public Health Salary Information and Personnel Needs

NEW SUBCOMMITTEE ON SALARY STUDY NEEDS

The recently reorganized Subcommittee on Salary Study of the Committee on Professional Education met with some of the members of the A.P.H.A. staff in New York City on September 16, 1949. The members of the new subcommittee are:

W. R. Willard, M.D., *Chairman*, Associate Professor, Yale University Department of Public Health

Robert E. Archibald, M.D., Director, Division of Local Health Administration, Massachusetts State Department of Public Health

Franklin B. Caffee, Public Health Representative, U.S.P.H.S., Region 2

Ruth Fisher, R.N., Associate Director, National Organization for Public Health Nursing

Meyer J. Plishner, Chief of Veterans Services, National Tuberculosis Association

Perry F. Prather, M.D., Health Officer, Washington County, Md.

Donald Simpson, Assistant Administrative Officer, Bureau of State Services, U.S.P.H.S.

The subcommittee discussed the past contribution and future objectives of the Clearing House on Public Health Salary Information and Personnel Needs. It was generally agreed that its role as a source of information on salary and personnel problems in the public health field should be maintained but that suggestions and fresh approaches from other areas, such as industry and teaching should be brought to the attention of *Journal* readers.

Donald Simpson and Paul Fox who attended the meeting as guests, reported that the U. S. Public Health Service probably could be counted upon to conduct studies of salaries of local and state public health workers for an additional year. By next year, sufficient data should be available to report on salary trends. The members of the subcommittee expressed emphatically that the studies already published have served a very useful purpose.

John Moore, Assistant Director of the National Social Welfare Assembly reported on the nation-wide survey of salaries and working conditions in the social work field which is being conducted with the participation of the Bureau of Labor Statistics at the present time. (Mr. Moore is Secretary of the National Advisory Committee to the U. S. Bureau of Labor Statistics.) The questionnaire for the study has been completed and a sample of communities has been selected. The lists of social work agencies and of persons employed in such agencies are being compiled by the various state and local committees.

Tentative plans were made to formulate salary recommendations for various professional groups in the public health field, similar to the recommendations for physicians, published in the March, 1949, issue of the Clearing House.

The major part of the discussion was taken up with problems of the personnel shortage in the public health field and possible methods and plans for active and effective recruitment. The subcommittee agreed that salaries are only one of several factors responsible for the failure to attract a greater number of qualified persons into the public health professions and that the A.P.H.A. as the professional society of public health workers has definite responsibilities to help recruit the public health workers of the future. This is in agreement with the resolution of the Governing Council at the 1948 A.P.H.A. Annual Meeting,

"that the American Public Health Association plan and establish an intensive national program of recruitment of public health personnel in all fields coöperating with such other interested agencies as it is deemed necessary . . . and seek sufficient funds from all available sources to place this recruitment program on a sound basis."

FURTHER SALARY STUDY DETAILS

"Statisticians and Salaries in State Health Departments" appears in *Public Health Reports* 64:36 (Sept. 9), 1949. It is a detailed analysis of this group of public health workers from material secured for the first study of state health department salaries. (Clearing House, *A.J.P.H.* 38:5 (May), 1948).

Aside from the information which this article provides on the distribution of statisticians and their salaries in state health departments, this is also an illustration of the ore of information there is in these studies which can be mined with time and personnel.

A supplement to the April study of "Salaries of Local Public Health Workers" (*A.J.P.H.* 39:7 (July), 1949) has also recently appeared. It is "Salaries of Nurses Employed in Public Health Work in Local Boards of Education and in Non-Official Agencies." The report, made by the Public Health Service, consists of an analysis, similar to the state and local salary studies, of data secured by the National Organization for Public Health Nursing for its annual salary study. Comparable salary data are thus now available for public health nurses in official health departments, boards of education, and nonofficial agencies. A limited supply of this report is available from Committee on Professional Education, American Public Health Association, 1790 Broadway, New York 19.

NEW YORK'S RECRUITMENT PROGRAM

The New York State Health Department doesn't believe in miracles, recruitment or otherwise. But it is recruiting public health physicians nevertheless, and its program may have relevance elsewhere. The foundation is the field training or fellowship program by which physicians who have completed their medical training and a year's interneship are given from 6 months to a year's training — depending on the specialty — in a selected county or district health department. The Fellowship stipend is $3,600 a year. The field training is followed by an academic year in an approved school of public health, for a health officer trainee, and sometimes for a tuberculosis consultant. In mid-1949, Franklyn B. Amos, M.D., director of the office of Professional Training, reported that 6 men were returning to the state after a year's school of public health study, that 5 in field training would begin work in schools of public health in the current academic year, and 6 were beginning field training.

But in order to insure that there will continue to be candidates for the fellowships, the department starts further back. It offers what it calls a junior public health interneship to students of the 9 medical colleges of the state who have completed their junior year of medical school. For a vacation period of 1 to 3 months they are assigned to work under the immediate supervision of an experienced public health physician in a county, district, or city health department, or in the Albany office of the department. The stipend for this service is $175 monthly, plus a 15 per cent cost-of-living bonus. In January, 1949, this announcement was distributed to the students; 43 applications were received, and 22 students accepted for this orientation in public health.

It goes without saying that medical society journals and many other information media have been used to publicize these training and recruitment programs. One of these was publication in the *Scalpel*, the journal of the premedical

honorary fraternity, and the wide distribution of reprints of an article "Do You Wish To Enter the Medical Specialty of Public Health?" by Dr. Amos. In this, public health is graphically described by applying to the community the terms with which the student is familiar in individual practice-history, physical findings, etiology, prognosis, and treatment. And because he is dealing with New York the author is able to say, "Public health is no longer an unremunerative specialty."

NORTH CAROLINA STUDIES SALARIES

Among the techniques used for improving public health salaries has been that of comparing existing salaries with those of other states. The Clearing House (*A.J.P.H.* 38, 6:868 (June), 1948) reported on a telegram survey made by the Louisiana State Board of Health as of January 1, 1948.

The North Carolina Merit System Council made a similar study in January, 1949, by questionnaire, the results of which have been published in mimeograph form. The study included 27 classes of positions on which a varying number of the 44 states returning questionnaires reported. Like Louisiana, South Carolina is among the states paying the highest rates for physicians but is somewhat below the average in most other positions.

At the same time the Merit System Council made a study of clerical salaries in both private and governmental employment in the state. Both of these studies are available to administrators dealing directly with salary problems from Dr. Frank T. de Vyver, Merit System Supervisor, Merit System Council, P. O. Box 2328, Durham, N. C.

UTAH ACTS IN A CRISIS

During the summer, Utah's Acting State Health Officer resigned after serving more than a year. This action followed legislative action by which appropriations for the department were reduced and no provision was made for increasing state health department salaries. The constitutional limit on a state health officer's salary was $5,000 annually. Because of this critical situation and because Utah's citizens had found their state referred to as very far down on the scale of public health performance, the Utah University School of Medicine, the Utah Public Health Association, the Utah Tuberculosis Association, and the State Health Department asked Dr. Ira V. Hiscock, Chairman of the A.P.H.A. Committee on State and Local Health Administration, to study Utah's health situation. His preliminary report was that salaries, particularly of the state health officer must be revised upward drastically before any basic improvements could be made in public health performance in the state.

Forthwith, on September 3, the House of Delegates of the State Medical Society passed a resolution asking the state administration to allow the Board of Health to make a salary adjustment to secure a well qualified public health executive without delay, pointing out that such a person could probably not be secured for less than twice as much as the currently stipulated salary of $5,000, and pointing out further that the State Board of Health had current resources available for such an increased salary. It has been reported that the salary for the state health officer position has already been doubled.

SALARIES IN ILLINOIS

The Illinois State Health Department, through its division of local health administration, has issued statistical tables showing average monthly and yearly salaries of full-time employees in local health departments of the state (exclusive of Chicago) for June and July, 1949. The 350 workers involved are divided into 12 occupational classifications.

Since this analysis excludes Chicago and since Illinois salaries are on a somewhat higher level than in many states, this might be good material for use in states that are still far behind in the salary procession. Charles F. Sutton, M.D., chief of the division says: "This is for the information of all concerned." Presumably, therefore, copies are available from him. Illinois Department of Public Health, Springfield.

MONTANA BECKONS NURSES IN POETRY

The Northwest has never been shy about the virtues of its scenery and its people. In true Chamber of Commerce style, the state's Merit System Council has prepared a nurse recruitment folder, *Your Future is in Montana.* It is a bright golden color with a picture of lovely lakes and mountains. "Public health nursing is something special . . . not the artificial nerve-wracking bustle found in congested areas," it says, then grows lyrical about the mountains, the people, and the opportunities for public health nurses. Warning! this kind of campaign makes it necessary to deliver; don't use it if your "shining mountains" are rises, your lakes, mud puddles, and your public health nurses stymied by lack of funds, poor leadership, local politics, and limited opportunities. In that case an internal improvement campaign would pay more dividends in recruitment and in other areas.

FORM OF FORCED CHARITABLE CONTRIBUTIONS

It has long been an unacknowledged fact that the contributions of many voluntary health and welfare agencies to the public well-being have been made possible in part by the contributions of their employees, particularly in the lower ranks, in the form of salaries below the going rate. An item in *Government Standard,* published by the American Federation of Government Employees, although more than a year old, is still pertinent. On the basis of purchasing power of the employee's salary, it estimates that between August, 1939, and November, 1947, the average dollar deficiency in gross salary for all federal workers in classified positions has accumulated to $3,785. In other words, says this article, over a 9 year period each federal worker has contributed nearly $4,000, in a reduced standard of living, to the running of the government.

By using official indexes and other published material of the Bureau of Labor Statistics, as this article does, similar material can be developed for other groups of workers, namely state and local health department workers. The *Government Standard* is published at 900 F St., N.W., Washington 4, D. C.

UTAH'S PAY PLAN — CORRECTION

These columns in the September issue described a pay plan for Utah's State Health Department. A meaningful phrase was left out inadvertently. The last sentence of the first paragraph should read that "the pay plan does not provide for a graded plan of meritorious pay increments extending throughout the period of employment in positions in which no further advancement is possible, as recommended by the American Public Health Association's Subcommittee on Salary Study, nor are the salaries adequate for certain positions in public health."

Credit Lines

HEALTH PRACTICE INDICES IN BRAZIL

The A.P.H.A. office is in receipt of a publication called "Rotinas De Saúde Pública" (Health Practice Indices) which has been used by Drs. Eugene Campbell and Victor Sutter in Brazil for stimulating the development of health services in various provinces. The fact that this useful instrument has been transferred to Brazil and the Portuguese language through the efforts of Dr. Sutter and the Chief of Party of the Institute of Inter-American Affairs in Brazil throws new light on the use of this instrument in English.

Incidentally, a new edition of *Health Practice Indices* in English based on practice in 1947 and in 1948 will be published by the A.P.H.A. around the first of the year.

LABORATORY ASPIRATIONS

Among the many good things coming out of the Atlantic Communicable Disease Center of the Public Health Service is its quarterly *Bulletin*. Of particular note is the April-May-June issue which portrays the activities, ambitions, and aspirations of the Laboratory Division of the Center, whose chief is Seward E. Miller, M.D. The material in effect documents in complete fashion his plans for improving diagnostic medicine.

In a condensed space it gives much valuable information to those who wish to keep advised of developments in the Laboratory Division. The reading matter is lightened through photographs and the staff is personalized. There are also graphs showing month by month morbidity totals for malaria, poliomyelitis, and typhus.

An earlier *Bulletin* of the Center, January-March 1949, devoted to field training activities of the Center, maintains the same high standard of production and information and is a must for those with training responsibilities. The *Bulletin* is presumably free on request from the Communicable Disease Center, 291 Peachtree St., Atlanta, Ga.

LOCAL RHEUMATIC FEVER PROGRAMS

Guide for Local Rheumatic Fever Programs has been issued by the Bureau of Maternal and Child Health of the New York State Department of Health. It was reviewed in detail before publication, by the department's Advisory Committee on Rheumatic Fever headed by Homer F. Swift, M.D., of the Rockefeller Institute for Medical Research. The pamphlet is also being used by the American Heart Association as an aid in guiding local affiliates in the development of programs. No information is given as to the extent or terms of distribution.

DIABETES DIET MANUAL

The American Medical Association has just published an unusual diet manual for physicians to give to diabetic patients. This booklet provides space for the individual patient's daily gram requirements in each of the main food groups: vegetables and soups, fruits and juices, breads and cereals, meats, milk, cream and butter and fats. Corresponding as well as related foods are listed according to the number of grams a patient may take and stay within his daily requirement.

The 16 page vest-pocket manual has a washable plastic cover without printing on the outside so that it may be referred to in public without calling attention to its owner's diabetes. The

linen rag stock is resistant to dog-earing. Type is large and bold. American Medical Association, 535 North Dearborn St., Chicago, Ill., single copy, $.35; 10 copies, $2.75; 25 copies, $6.75; 50 copies, $13.40; 100 copies, $26.60. Postage prepaid.

HOUSING IN BLIGHTED AREAS

A readable, attractively prepared and well documented report of the quality of housing in two selected areas of Miami, Fla., has been released by the Dade County Health Department and the Planning Board and Slum Clearance Committee of the city. The A.P.H.A. housing appraisal method was used in gathering data. The report represents another in an increasing flow of documents that provide concise and reliable information on housing conditions of communities of all sizes throughout the nation. The report, entitled "Dwelling Conditions in the Two Principal Blighted Areas, Miami, Florida" is presumably available from the Dade County Health Department, Miami.

ACCIDENT PREVENTION AMMUNITION

Everything you might want to know about accidents in the United States in 1948 appears in *Accident Facts: 1949*. Text, tables, graphs, and pictographs all tell a detailed and not very hopeful story, except that the accidental death rates have dropped a little year by year. Motor vehicle traffic deaths for 1947 and 1948 are analyzed separately for 77 cities with populations of 10,000 or more.

This is a source book that contains material for many accident prevention campaigns but is far too detailed for widespread distribution. Some of its more dramatic facts are:

Accidents affect the national economy more than any disease.

The 98,000 accidental deaths in 1948 destroyed almost two million working years and nearly three million life years.

Practically every one of the deaths was preventable by the same methods used in combating disease which include:

a. Education or control of potential victims.
b. Elimination of harmful agents from the environment or rendering them harmless.
c. Development of new ways to make environments safe and persons less susceptible to accidents.

National Safety Council, 20 N. Wacker Drive, Chicago 6, 100 pp., 60 cents, reductions up to 25 per cent for quantity orders.

THE LESSONS OF FAILURE

New Jersey is one of several states without effective permissive district health unit legislation. A Regional Health District Bill, sponsored by the New Jersey Health and Sanitary Association, was not acted upon in the 1949 legislative session.

In commenting upon the failure of this bill to meet legislative approval the May *News Letter* of the Health and Sanitary Association says in part:

"The failure of S-189 to get anywhere in the Senate may have been due to something other than a shortage of time. . . . S-189 had many of the weaknesses of the existing Regional Health Commissions and only a little of the strength of the County Health Department plan. If . . . passed there would have been difficulty in concentrating a demand for local health services because no local place was provided for the organization to begin. The absence of . . . taxing machinery . . . would have made financing difficult and there would have been no assurance that, once established, the new health districts would not readily fall apart. Bills of this nature will continue to be under serious handicaps until they have the full understanding and active support of unofficial organizations of local people, as well as of such groups as the Association of Township Committeemen, the Association of Chosen Freeholders, and the League of Municipalities. A better bill . . . should be prepared soon and presented to the state for full discussion well in advance of next year's legislative session."

Other states that have failed to get legal approval of permissive health legislation, as for example, Iowa, might well

ponder these two lessons, namely, that the bill presented should be well drawn for carrying out its intended purposes, and that it should have behind it widespread and informed public support. And that is no job to be done by the fourth assistant to the third associate in the last week before the legislature opens.

SHARING A MEDICAL LIBRARY

The New York Academy of Medicine recently made a gift of 12,000 volumes to the Southwestern Medical College, Dallas, Tex. These volumes are the larger portion of a gift of 20,000 volumes received by The New York Academy of Medicine from the New York Public Library in 1900, when the latter discontinued acquiring medical works. In presenting the 12,000 volumes to Southwestern Medical College, the New York Academy of Medicine Librarian, Janet Doe, stated that all of the larger medical libraries are located east of the Mississippi, and it seemed not only useful but imperative to hasten the growth of a good medical collection in a new area in the West.

HEALTH EDUCATION CONFERENCE

An encouraging and stimulating summary of direct inservice training in action—in terms of the staff as individuals in a democracy—is found in the report of a Regional Health Education Conference held in Los Angeles in May, 1949. Participants were from the area of the Western Branch of A.P.H.A. The 16 page report is published by and presumably available from the Bureau of Health Education, California Department of Public Health, San Francisco.

WORTH ACQUIRING

Winter Enemies, by Wilson G. Smillie, M.D., is published by the Life Conservation Service of the John Hancock Mutual Life Insurance Co. (Boston 17). The winter enemies, of course, are colds, grippe and influenza, and the pamphlet is a brief and simple description of their beginnings and what to do about them, chiefly, "do not go out of the house while your fever persists." Hancock also has a new list of its booklets on health and safety that are currently available.

Guideposts to Mental Health is a series of 7 pamphlets recently introduced at the New York State Fair in Syracuse by the State Department of Mental Hygiene through a diorama exhibit. Their subjects, corresponding to the seven ages of man, are Life Begins, School Days, Teen Time, Your Job, Your Marriage, The Middle Years, and the Golden Age. Each of the 7 is printed in a different color paper and ink. They provide positive mental health suggestions rather than negative information about mental illness. Single copies or single sets of the 7 are available without charge from Department of Mental Hygiene, Alfred E. Smith State Office Building, Albany 1.

"Interrelationships of Local, State, and National Planning" and "Cooperation of the Church and Social Work" are reproductions by the National Social Welfare Assembly of certain papers delivered at the June, 1949, National Conference of Social Work in Cleveland. In the form of Assembly Letters, they are in large type and well spaced for easy reading. Ten cents each for single copies, 10 or more copies 8¢ each plus postage. National Social Welfare Assembly, 1790 Broadway, New York 19.

Annual Report of the Federal Security Agency, 1948 is the first report of this agency as it is now organized. The reports of its constituent agencies—the Public Health Service, the Social Security Administration, the Office of Education, and the Office of Special Services—are also issued in separate volumes. The full report is available from the Government Printing Office for $2, that of the Public Health Service for 45 cents.

Our Babies are Crying is the unusual

title of the 1948 annual report of the Richmond County (Georgia) Health Department. Its opening line is, "All normal babies cry, sick babies cry, too, but dead ones utter no sound." And then it announces what is obviously considered amazing news, that Richmond County's infant death rate, stillborn rate, and maternal mortality rate are equal to those of the Scandanavian countries, which they say have the best record in the world, and that the Negro rate is lower than the white. The report gives some of the reasons for this situation—its delivery service dubbed the "Stork Club" by the mothers, its antisyphilitic program, and its incubator for every premature baby.

One item, or rather one omission in the report is puzzling. For a number of years Richmond and Columbia County have been reported as having a consolidated bi-county health department, but this report appears to be innocent of that fact except to mention $2,500 received from the Columbia County Health Department. Do Columbia County babies "utter no sound"? Richmond County Health Department, Augusta, Ga.

Saskatchewan Hospital Services Plan is the report of the second year of operation of this plan to provide a means of spreading the cost of hospital care over the whole population, that has been worked out by our neighbor on the north. For a population of nearly a million, 93 per cent of whom are covered, the plan was operated with an average staff of 181 in 1947 and 163 in 1948. Expenditures in 1948 were nearly 9 million dollars, of which more than 40 per cent came from hospitalization taxes and the remainder chargeable to general provincial funds. The per capita expense was $11.42 of which less than 7 per cent was administrative expense. "This is a valuable record of experience in a field that still has growing pains."

BOOKS AND REPORTS

All reviews are prepared on invitation. Unsolicited reviews cannot be accepted.

Length of Life: A Study of the Life Table—*By Louis I. Dublin, Alfred J. Lotka, and Mortimer Spiegelman, (rev. ed.) New York: The Ronald Press Company,* 1949. 379 pp. Price, $7.00.

The first edition of this book, under the authorship of Dublin and Lotka, appeared in 1936. The story of the life table was persuasively told — its meaning, history, versatility in dealing with social, economic, and medical problems involving human longevity, and its implications for the student of human society. The results of the distinguished research of the authors and of others in this field were brought together. Over the years it has been a unique and very useful book.

The present book, the second edition, represents a thorough revision and, in the rewriting, a good book has been made still better. Previous applications of the life table have been brought up to date, the breadth of coverage has been increased, and there have been suitable deletions and contractions, in line with newer developments. Among the noteworthy additions are the rapid method of construction of an abridged life table developed by Greville, and a discussion of the implications of generation life tables in the interpretation of time changes in life table values.

With the numerous and varied mortality studies in their own laboratory and elsewhere since the appearance of the first edition, the authors were faced with a difficult problem of selection of material to be covered. They did not include the methodology involved in arriving at prognosis figures in long-time follow-up studies, although this would have been appropriate and welcome. They have, however, avoided the pitfall of over-extending the book and have included in footnotes numerous references to pertinent studies not discussed in the text. Many vigorous years have been added to the length of life of the book by the new edition.

MARGARET MERRELL

Syphilis: Its Course and Management—*By Evan W. Thomas. New York: Macmillan,* 1949. Price, $3.00.

Since this is the first text to have been published since J. E. Moore's *Penicillin and Syphilis* in 1946, it is certain to be welcomed by the many who need a summarization of the compendious literature concerning the developments since 1943. Although Dr. Moore's text had and will continue to have great value for basic reference, summarizing as it does the early fundamental investigations, Dr. Thomas's monograph expresses the results of three fertile additional years in research in syphilotherapy. His text will be important to every public health physician concerned with venereal disease control, as well as to the clinical syphilologist.

In addition to his observations of the effect of penicillin, the author gives first expression to many of the newer concepts of the course of the disease which have arisen from the use of this short-term therapeutic agent, as well as information derived from a more specific serological test for syphilis titered more exactly than has hitherto been feasible. Among these newer concepts is the idea that immunity may mean simply that the patient will not react to re-inoculation with a new chancre, even though the inoculation has been successful. This concept, developing from Chesney's rabbit work, has not been widely accepted as applicable to syphilis in the human being, whom the clinical syphilologist

had usually considered completely refractory to superinfection.

Other generalizations of consequence are frequent, for the author does not fear a conclusion at variance with the older authorities. A high degree of objectivity is maintained, however, and all conclusions are based upon observations clearly stated. Of particular interest is the discussion of the Dattner-Thomas interpretation of spinal fluid findings, which has aroused much discussion in recent years and is here clearly set forth.

A chapter on the public health aspects of syphilis by Theodore J. Bauer, Chief of the Venereal Disease Division of the U. S. Public Health Service, concludes the book, giving concisely the methods of control utilized in this country.

JAMES H. LADE

Teacher's Guide for Health Education—*By Morey R. Fields and Avis E. Edgerton. New York: Remsen Press,* 1949. 543 pp. Price, $6.75

This guide is a reference book for teachers rather than a text or course of study. It contains a wealth of information concerning various topics that frequently are included in elementary school health instruction but the user is repeatedly reminded that teaching does not need to follow the sequence of topics used in the guide.

Following brief introductory statements relating to general principles of health education, the guide is divided into four parts. The first deals with health instruction in grades 1 and 2, the second with grades 3 and 4, the third with grades 5 and 6, and the fourth with grades 7 and 8. Each of these parts is subdivided into sections that relate to topics commonly included in the health instruction program, such as growth and development, nutrition, teeth, eyes, mental and social adjustment, etc. Under each of these headings the authors present viewpoints concerning the accomplishments of pupils, suggest pupil activities, and list page references for a selected group of health texts.

Two appendices provide references on various topics; the names and addresses of agencies offering free or inexpensive materials; and a list of motion pictures, pamphlets, posters, booklets, slides, charts, etc., that are deemed appropriate for elementary school health instruction.

CHARLES C. WILSON

A Professional Guide for Junior Engineers—*By William E. Wickenden. New York: Engineers' Council for Professional Development,* 1949. 56 pp. Price, $1.00.

A clearly thought out and well presented guide for the recently graduated engineer is, without a doubt, an extremely desirable document. Professor Wickenden, whose untimely death preceded the publication of this treatise, had devoted unstintingly of his energy and ability to the younger members of his profession and this guide is a fitting climax to his efforts.

The booklet begins with a short historical account of the development of the engineering profession, and proceeds to the various problems the young engineer must face and solve during the early part of his career. The author presents the problems of ethics, professional conduct, association, etc., and then develops his answers to them. Although much of the subject matter in the booklet is of a controversial nature, the author's intent does not appear to be the forcing of ideas upon the reader, but rather the stimulation of thought processes and continuous personal development.

A suggested annotated reading list of a basic nature relating to all fields of human knowledge and behavior is presented. The list was prepared on the recommendations of a number of eminent men both in and out of the engineering profession. An additional appendix is a self-appraisal questionnaire designed to

assist the young engineer in planning his career on a continuing basis.

MAURICE A. SHAPIRO

Diagnosis of Viral and Rickettsial Infections—*By Frank L. Horsfall, Jr., M.D., Editor. New York Academy of Medicine—Section on Microbiology—Symposium No. 1. New York: Columbia University Press,* 1949. 153 pp. Price, $3.75.

A number of individuals present the laboratory diagnosis of some of the more common viral and rickettsial infections, excluding the common exanthems most frequently seen in childhood. A mere perusal of the book is sufficient to convince the informed reader that these authors are qualified to speak with authority on their particular subjects. The chapters are brief but comprehensive, giving the reader an adequate concept of the problems of laboratory diagnosis. Each chapter concludes with a list of references.

The volume will be extremely useful to a limited group of individuals who are concerned particularly with problems of epidemiology and laboratory diagnosis. Clinicians will quickly come to the conclusion that it is still not possible in many instances to have the laboratory help in making the diagnosis, since frequently the patient will have either died or recovered by the time the information is available. The procedures tend to be complex and not readily usable in ordinary laboratories which do not have highly trained personnel and specialized equipment. The book is an excellent one and meets a very definite need for a select group of workers in the virus and rickettsial field.

LLOYD FLORIO

Nutrition and the Soil. Thoughts on Feeding—*By Dr. Lionel James Picton, O.B.E. New York: The Devin-Adair Company,* 1949. 374 pp. Price, $4.00.

The introductory chapter of this book was written by Dr. Jonathan Forman, editor of the *Ohio State Medical Journal*. Its theme is "Creative versus Curative Medicine." What Forman has to say as well as all that Picton says in the 22 chapters that follow, should have an appeal to the public health worker and to all interested in the various aspects of preventive medicine. The contention is made that the American people should become more interested in health and its maintenance than in sickness and its care. In the emphasis placed upon health insurance one may feel that an indemnity of a sort is being offered to those who become sick while those who stay well are penalized.

The author believes that many of the illnesses afflicting man are due to a lifetime of wrong nutrition. Better sanitation, preventive medicine, and nutrition have served to lengthen human life but have added little to human happiness because of the "degenerative diseases." Proper selection of foods alone will not correct the evil. The author believes that foods must be properly handled between the field and the table and that food values will depend upon the condition of the soil producing it. He argues for the "doctrine of return," that is, a return to the soil of human, animal, and crop wastes. This will eliminate river pollution and the damage done the soil by mining it instead of managing it.

The material in the book is entertainingly written and well documented. In the back are some whole-meal recipes and an excellent index. The material on the whole is a good "tie-up" between the nutritional and public health worker, the food producer and handler, and the average housewife interested in properly feeding her family. It is well bound and plainly printed on non-glazed paper.

IRA A. MANVILLE

Oxidation—Reduction Potentials in Bacteriology and Biochemistry—*By L. F. Hewitt, Ph.D., B.Sc. (5th ed.)*

London, England: Staples Press Ltd., 1948. 119 pp. Price, 4s. 6d.

The object of this monograph is stated by the author to be an introduction to the subject of oxidation-reduction potentials so that workers in various biological fields of research could make use of the underlying principles and practical applications of these phenomena. The present edition which went to press in January, 1948, is an excellent review of the subject and is highly recommended for those persons who are concerned with research in almost any field of biology. The monograph is concise, the definitions are clear, and the references are sufficiently numerous to provide an introduction to any one of the many fields correlated in the review. The chapters include General Considerations, Experimental Methods, Systems of Biological Interest, Bacteriological Applications, and the Polarograph. Probably the general worker in public health matters will find the monograph too technical. The laboratory research worker on the other hand will find this an excellent correlation of the knowledge of "oxidation-reduction potentials in biochemistry and bacteriology." J. C. SNYDER

Polio Can Be Conquered. *New York: Pamphlet No. 150 of the Public Affairs Committee.* 1949. 31 pp. Price, $.20.

This unusually clear and readable pamphlet telling what lay people should know of the present knowledge of the nature and treatment of poliomyelitis is highly recommended for wide distribution and study. It tells in simple language the nature of the disease, the present concept of how it is contracted, and what are the clinical manifestations that suggest the diagnosis. It also gives a resumé as to what constitutes good treatment and describes how such treatment can be achieved, particularly financially. The place of Sister Kenny in the treatment of polio is given, followed by the wise statement that end results are similar regardless of whether the concept of the disease accepted is that of Sister Kenny or that of the majority of doctors. Progress in research is mentioned in some detail, and valuable tips for parents are listed.

Although the pamphlet states that it was prepared with the coöperation of the National Foundation for Infantile Paralysis, it gives at the bottom of page 13 a not entirely accurate or clear understanding of the Foundation's policy on family aid. In its *Chapter Reference Book*, the Foundation states very clearly that a chapter is to "offer to pay expenses in full or in part, as needed, to insure that the family will not have to reduce its standard of living materially." It is not the intention or policy of the Foundation to pay all the expenses of all cases, regardless of other financial backing, but rather to assure proper treatment, giving financial help when the need can be presumed without too formal an economic investigation.

A booklet that is to have as wide a circulation as is hoped for this pamphlet should embody a slightly more meticulous use of the English language. On page 6, it speaks of "the spinal cord and the central nervous system" and on page 11, of "doctors and scientists." Despite what is written on page 9, nothing can take the place of destroyed nerve cells and take on their job of relaying messages, etc. But on the whole, the pamphlet is indeed excellent for its purpose of informing the lay public and should have a wide reading.

PHILIP M. STIMSON

The National Health Service—*Prepared by the British Ministry of Health and the Central Office of Information. New York: British Information Service*, 1949. 36 pp. Price, $.20.

Students of the new features of the British National Health Service Act which came into force July 5, 1948, will

welcome this official statement in brief form which tells comprehensively what the service is, the hospital and specialist features, services rendered by the local health authorities, the relationships of the family doctor with his patients, the relationships of the authorities with the professions, and the steps that have been taken in building the new service.

The Minister of Health in Great Britain now has the duty "to promote the establishment in England and Wales of a comprehensive health service designed to secure improvement of the physical and mental health of the people of England and Wales and the prevention, diagnosis and treatment of illness." In brief compass this is an excellent digest of a complex picture from the viewpoint of the British Government. It is recommended reading.

REGINALD M. ATWATER

Advances in Internal Medicine. Vol. 3—*Edited by William Dock and I. Snapper. New York: Interscience Publishers,* 1949. 475 pp. Price, $8.50.

This, the third volume of *Advances in Internal Medicine,* is unusually interesting. Like the previous volumes, it consists of a series of reviews on topics in which there have been recent outstanding advances. The subjects chosen this time have considerable bearing on public health.

The papers on acclimatization to heat, and the use of BAL in metal poisoning will interest those in industrial medicine. The articles on the factors which modify the action of penicillin and on the use of streptomycin in tuberculosis will be welcomed by those who deal with syphilis or tuberculosis. The review of Histoplasmosis is particularly timely from the epidemiologic viewpoint, and that on Plasma Fractionation has direct bearing on the control of communicable diseases.

The papers are well written and thorough. Although some of them are a little out of date due to delays in printing, all are worth reading. The volume is highly recommended.

WILLIAM A. DAVIS

International Digest of Health Legislation, Vol. 1, No. 1—*Geneva, Switzerland, World Health Organization. New York: Columbia University Press,* 1948. 144 pp. Price, $1.25.

From 1909 to the end of 1946 the *Monthly Bulletin of the Office International d'Hygiene Publique* carried, among other useful data, a section on public health legislation. When the World Health Organization took over, it was decided that international public health legislation should be the subject of a separate bulletin, of which this is the first number. It consists of reprints and English translations of, and extracts from, the most important laws and regulations adopted in different countries, dealing with public health and related subjects, such as mental hygiene and the practice of medicine and nursing. This first issue has the texts or digests of 44 pieces of legislation in 16 nations, although more than half of them are orders and decrees promulgated in France. Surprisingly enough, there is no mention of any of the profusion of public health legislation in the United States, and only one allusion to the United Kingdom, a set of regulations on school health adopted in Scotland. Those who are concerned with public health laws and regulations and want to compare foreign procedures, standards and verbiage with our own will find this bulletin of interest and value.

JAMES A. TOBEY

A SELECTED PUBLIC HEALTH BIBLIOGRAPHY WITH ANNOTATIONS

RAYMOND S. PATTERSON, PH.D.

Things You Can't Do Anything About—This is the sort of statistic that intrigues me! The last war didn't—as so often it is alleged war does—significantly increase the proportion of male births to females. In recent years (white) American boys appeared at the settled rate of 106-plus for each 100 girls through war times and peace times alike.

ANON. War and the Sex Ratio of Births. *Stat. Bull.* (Met. Life Ins. Co.) 30, 6:5 (June), 1949.

Expense Study—Isn't it your guess that transportation gives rise to as many cankerous irritations as any other problem in personnel management? How one agency has worked out a method by which nurses may have an automobile for personal as well as professional use should be of interest to all who have to settle squabbles about cars.

APPEL, J. An Automobile Plan for Nurses. *Pub. Health Nurs.* 41, 9:482 (Sept.), 1949.

Anent Medical Care — Mustered here are some arguments in favor of the Flanders-Ives-Herter-Javits Bill which would develop within the framework of the Public Health Act "a voluntary health insurance bill calling for compulsory public contribution." In it the formula for federal aid follows the lines of the Hospital Construction Act.

BAEHR, G. Comments upon S-1970. *Pediatrics* 4, 3:373 (Sept.), 1949.

Art of Listening—There should be a lot more papers like this one on how to get along with "the help." We need to understand our own failures to behave as we should, and we need to understand the people we supervise, if we are to succeed in bossing them well.

BLADEN, V. W. Work Relations. *Canad. Pub. Health J.* 40, 7:283 (July), 1949.

Rose by Any Other Name—British choice of designations is usually felicitous, but "Home Helps" is something else again. Home Helps are people. The Home Help (singular), the paper says, comes to the health office once a week for briefing but usually on pay day. From these items you can figure out as much as I know about the Home Help person, though I have read the paper.

CHADWICK, B. The Training of Home Helps. *M. Officer* 82, 10:102 (Sept. 3), 1949.

Not New But Novel Here—These people have held classes to educate women for childbirth long enough now to be sure they are a great help during pregnancy and labor. With all the health education going on, it's strange, the writers comment, that so little has been done to educate expectant mothers for this important job.

THOMS, H., AND GOODRICH, F. W., JR. Training for Childbirth. *J.A.M.A.* 140, 16 (Aug. 20), 1949.

Equally Nutritious, But—Add this memo to your little store of miscellaneous information. Muscle cuts of beef from the various anatomical parts of a young steer and an ancient cow were tested for nutritional values. You've guessed the answer: though statistically insignificant differences do exist, essentially they were all of the same nutritive worth.

HOAGLAND, R., *et al.* Nutritive Properties of Protein in Different Cuts of Beef. *J. Nutrition* 38, 3:381 (July), 1949.

For High-Level Planners—By the end of last year 17 states had enacted laws for a permanent cancer control program. All states have undertake.. cancer control activities, of sorts—some highly successful. Specific techniques that all might employ are set forth here.

KAISER, R. F. Proposed Elements of a State Cancer Control Program. *Pub. Health Rep.* 64, 37:1169 (Sept. 6), 1949.

Faith in Pills—In a large-scale study, penicillin tablets were given to one group, placebos to the controls. No differences in respiratory illnesses were demonstrable but the placebos helped or harmed many of the controls. While the study adds nothing to penicillin's laurels, it is an eloquent reminder of what the human imagination can do.

KUH, C. AND COLLEN, M. F. Mass Penicillin Prophylaxis. *J.A.M.A.* 140, 17:1324 (Aug. 27), 1949.

Standard Deviations, et al.—Warnings are here for the ambitious scientist who yearns to evaluate whatever he has been doing. They are concerned with sampling, measurements, record keeping, and methods of presentation, all of which have pitfalls into which the unwary often tumble. Even a "$\pm$" is something not lightly to be bandied about.

LUYKX, H. M. C. Progress Without Statistics. *J.A.M.A.* 141, 3:195 (Sept. 17), 1949.

Widespread though Preventable—It was news to me when I read, ". . . today, brucellosis ranks as the most prevalent disease of animals transmitted to man." If you are in the same state of ignorance you, too, will profit by reading these two papers.

MAGOFFIN, R. L., *et al.* An Epidemiologic Study of Brucellosis in Minnesota (and) FLEMING, D. S., AND ROEPKE, M. H. Relation of Human and Bovine Brucellosis in Minnesota. *Pub. Health Rep.* 64, 33:1021 (Aug. 19), 1949.

While Teeth Are Forming—When you drink regularly from a fluorinated water supply you ingest 1–1.5 mg. of fluorine a day. You get only 0.2–0.3 mg. a day if you eat a normal diet (and it doesn't make much difference where the solid food or milk was grown). So it seems justifiable, concludes the writer, to consider the possibility of a direct dietary supplement during the tooth-forming years if your community drinking water supply is deficient in fluorine.

MCCLURE, F. J. Fluorine in Foods. *Pub. Health Rep.* 64, 34:1061 (Aug. 26), 1949.

About Majority-Dictated Science—Government-managed religion was given up centuries ago. But centralized-government management of medicine, advocacy, and teaching are becoming live issues, warns this learned Dean in a brilliantly philosophical analysis of current trends toward the service state. You'll rise to his bright intellectual bait!

POUND, R. The Professions in the Society of Today. *New England J. Med.* 241, 10:351 (Sept. 8), 1949.

Word to Self-Servers—If you, too, patronize those almost human coke dispensing machines you'll be somewhat taken aback by the weird potentialities for contamination with which these boons for the thirsty seem to be afflicted. If you are a sanitarian, you'll be professionally, if not personally, interested. Incidentally "steps" are being taken.

SENN, C. L. Sanitation of Bulk, Drink-Vending Machines. *Modern San.* 1, 5:17 (Sept.), 1949.

Potentially Dangerous Gadgets—Three kinds of radiation injury may follow the use of shoe-fitting x-ray machines: abnormal development of the child's foot, acute radiation burns, and chronic injury to blood forming organs (of the attendant). All three can be prevented.

WILLIAMS, C. R. Radiation Exposures From the Use of Shoe-Fitting Fluoroscopes (and) HEMPELMANN, L. H. Potential Dangers in the Uncontrolled Use of Shoe-Fitting Fluoroscopes. *New England J. Med.* 241, 9:333 (Sept. 1), 1949.

Confusion Compounded — Dietary allowances may reasonably be used to build a nutritional floor beneath which maintenance of health in individuals cannot be *assumed*, says this Canadian teacher. They are put to many other uses for which they are not competent, he warns. Hard to justify are the differences in Canadian and U. S. Standards when nothing but an imaginary line—than which nothing is less substantial—separates the two peoples.

YOUNG, E. G. The Use and Abuse of Dietary Standards. *Canad. Pub. Health J.* 40, 8: 327 (Aug.), 1949.

Public Health in Foreign Periodicals

GEORGE ROSEN, M.D., PH.D.

NO one interested in public health in the world today can afford to overlook the periodical literature of Latin America. A global war and its aftermath have furthered in this area a heightened awareness of new and old health problems. Almost every field of public health endeavor has been affected in content and point of view by this awareness. To illustrate this ongoing development let us glance at a selection of recently published materials from a number of countries.

An overall view of the subjects uppermost in the minds of Brazilian public health workers is available in the preliminary report on the Seventh Brazilian Congress of Hygiene (São Paulo, December 12–19, 1948).[1] The chief topics of discussion were health education, rural hygiene and public health, nutrition, malaria, yellow fever, other communicable diseases (amebiasis, trachoma, poliomyelitis, schistosomiasis, typhoid fever) and sanitary engineering.

PUBLIC HEALTH EXPENDITURES IN SÃO PAULO 1890–1948

An indication of the growth of public health in the Brazilian state of São Paulo is offered by Mascarenhas in a study of the funds expended during the period 1892–1948.[2] The budgets of São Paulo provided the data employed. Mascarenhas classifies the public health services into two groups: (a) those carrying on preventive and preventive-curative activities, among them hospitals for communicable diseases; (b) those comprising general and psychiatric hospitals, private hospitals aided by the state, and from 1892 to 1931 expenditures included under the heading of public assistance.

In 1893, the government of São Paulo allotted Cr $0.49 per capita for preventive-curative services. These expenditures rose gradually until the sum of Cr $6.94 was reached in 1943. Thereafter the amount rose rapidly to Cr $51.15 in 1948. Expenditures for the second group of health services was Cr $0.31 in 1893. By 1943, the state was spending Cr $3.38, and in 1948 the amount expended was Cr $22.20.

In 1893, the expenditures for the preventive-curative services and for the other health services represented 3.94 per cent and 2.47 per cent respectively of the budget of São Paulo. In 1948 these percentages were respectively 8.78 per cent and 3.81 per cent. Mascarenhas concludes that the per capita expenditures for public health services in São Paulo

should be about the same as the expenditures on state and local levels in the United States.

ADMINISTRATION AND PERSONNEL FOR PUBLIC HEALTH

Two interrelated problems of immediate concern to Brazilians are the creation of needed public health services, and the procurement of trained personnel to operate these services. Andrade,[3] for instance, points out that the existing system of public health laboratories in Brazil is inadequate to supply the needs of the population, and offers a plan for a network of laboratories based on the experience of other countries, as well as on the topography, transportation facilities, and population density of Brazil. In discussing his plan, Andrade emphasizes the fundamental need for trained laboratory personnel and of the related necessity for developing training programs.

The basic significance of the personnel problem is clearly envisaged by Brazilian public health leaders. In fact, at the Sixth Brazilian Congress of Hygiene, a considerable portion of the program was devoted to the personnel needs of the public health services. The papers presented at that meeting have now been published in the *Revista de Higiene e Saúde Pública*, the organ of the Brazilian Public Health Association.[4] Public Health nurses, laboratory workers, entomologists for malaria control, sanitary engineers—all these categories are in short supply, and programs for training people are discussed in detail. Noteworthy is the influence of methods and points of view developed and utilized in the United States.

SANITATION OF FOOD ESTABLISHMENTS IN SÃO PAULO

The influence of American methods is likewise evident in Christovão's study of sanitary conditions in food establishments in the central area of São Paulo.[5] Thirty-two cafes and bars and 12 restaurants were selected at random from those in the study area. The washing and disinfecting methods employed at these establishments were observed and a bacteriological survey was made on a sample of 1,568 utensils. The bacteriological survey included the total bacterial count, as well as specific identification of pathogenic staphylococci and streptococci, coliform organisms, tubercle bacilli and pneumococci. Standards employed were those adopted by the American Public Health Association.

Very large numbers of bacteria were found on all types of utensils examined. For instance, coliform organisms were found in 40.7 per cent of the lots of utensils examined. *E. coli* was found in 4.7 per cent and 6.3 per cent of the lots of glasses and demi-tasse cups from the cafes and bars, and in 9.1 per cent, 4.5 per cent, and 4.5 per cent of the lots of glasses, dishes, and forks from the restaurants. Only 14.1 per cent of the lots of demi-tasse cups could be considered satisfactory, and none of the glasses were up to standard. The pathogens found included hemolytic streptococci, staphylococci, pneumococci, and coli organisms. Tubercle bacilli were not isolated. Christovão concludes that his findings indicate a serious sanitary problem. He points out that the washing methods used are extremely crude, and that there was a complete lack of any attempt at disinfection of utensils. Measures to improve this situation are proposed. Immersion of washed utensils in water at 77°–82° C. for one to two minutes is suggested. For glasses and demi-tasse cups use of inorganic chlorine compounds is indicated.

NUTRITION IN BRAZIL

Attention is being directed at nutrition and its problems. A general review of surveys on the nutritional status of the Brazilian people is presented by Cardoso.[6] After discussing studies of the

composition of Brazilian foods, and the milk problem in Brazil, he offers suggestions for the correction of the chief nutritional deficiencies of the Brazilian population. These include food enrichment, nutrition education especially in rural areas, and government action to increase production.

Efforts are also being made to utilize native foodstuffs as far as possible. Thus Ribeiro and Cardoso report on the ascorbic acid content of the papaw (*Carica papaya* L. 1753).[7] They found that 100 gm. of the whole fruit contains 75.51 mg. of vitamin C. There were no significant differences in the vitamin C content of different portions of the fruit.

Barreto and Da Costa review the nutrition problem in Brazil, referring to the various organizations interested in it.[8] They propose the creation of a National Nutrition Service to develop systematically and to implement a nutrition program for the entire country.

WORKING CONDITIONS IN COAL MINES

Several interesting studies have recently appeared on specific groups of the Brazilian population. While inspecting the mines of Arroio dos Ratos and Butiá, Oliveira had an opportunity to study the social and sanitary conditions of the mine workers and their families.[9] In addition to a technical description of the two mines, Oliveira discusses the working environment, toilet facilities, water supply, accidents, and occupational illnesses of the miners, and the provision of social services for the families of the workers. It must be said that the conditions described in this report compare favorably with those presented in *A Medical Survey of the Bituminous Coal Industry* (Washington, 1947).

SANITARY SURVEY IN SÃO PAULO

An extensive sanitary survey of a district in the city of São Paulo is reported by Cristóvão and Chope.[10] The study was undertaken to show the effectiveness of administrative planning in health matters, provided accurate information is available on the sanitary condition as well as on the most important social and economic problems of a given population. The Jardim América District was selected for this survey because of the economic heterogeneity of its population. As an example of a well rounded health survey this report is worth studying. Information was obtained on the demographic characteristics of the area, sanitary characteristics of the district, and the medical status of the population. It illustrates clearly the data needed for planning a well rounded public health program. For details the reader is referred to the original monograph which comprises over 400 pages.

RHEUMATIC DISEASES IN BRAZIL

Azambuja calls attention to the importance of rheumatic diseases in Brazil.[11] Buengeler reported signs of rheumatic heart disease in 9 per cent of 600 autopsies, Penna de Azevedo in 6.2 per cent of 6,700, and Gil Robles in 11 per cent. Clinical signs of rheumatic cardiopathy were found in 2.4 per cent, 2 per cent and 1 per cent of the school children of Curitiba, Pôrto-Alegre and Rio Grande. Azambuja asserts that the frequency of rheumatic cardiopathies is equal to that of other countries.

A FOCUS OF SCHISTOSOMIASIS IN PARANÁ

Coutinho and Pessôa[12] report the results of an investigation in the city of Jacarezinho where they established the existence of an autochthonous focus of schistosomiasis (*S. mansoni*). In 51 examinations of feces, 20 individuals were found to harbor *S. mansoni*. All were under the age of 20, and had been born and were living in the area. The principal focus was localized at a stream, Água Feia. The mollusk, *Australorbis glabratus*, was found in this stream. The authors regard this as a focus of recent origin, and call attention to the possible

dissemination of the disease from this region.

ENDEMIC GOITER IN MINAS GERAIS

Endemic goiter occurs in the state of Minas Gerais (Brazil). Paula undertook a study to determine the prevalence of the condition.[13] Endemic goiter was encountered in 49 out of 54 communities, that is, 90.7 per cent. The prevalence varied from 10 to 71.6 per cent in the different communities and from 10 to 94 per cent in educational institutions. Paula believes endemic goiter to be on the increase in Minas Gerais, and calls attention to the relationship of this situation to soil impoverishment and the poverty of the population. Iodized salt is advocated as a prophylactic measure, together with education and improvement of social conditions.

VOLUNTARY AGENCIES IN THE BRAZILIAN ANTITUBERCULOSIS CAMPAIGN

As in other countries, the campaign against tuberculosis in Brazil has involved the participation of voluntary agencies.[14] The Santas Casas de Misericórdia pioneered in tendering assistance to people with tuberculosis. Antituberculosis organizations, founded at the beginning of the 20th century, contributed greatly to tuberculosis prevention through popular health education. Ribeira describes the various Brazilian organizations and their work, emphasizing the great value of voluntary organizations. He appends a list of all the antituberculosis organizations in Brazil.

OTHER COUNTRIES OF LATIN AMERICA

This column is devoted to Brazil. A subsequent column will continue the subject of Latin America and will consider other countries within that area.

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BOOKS RECEIVED

Listing in this column acknowledges the receipt of books and our appreciation to the senders. Space and the interests of readers will permit review of some, but not all, of the books listed.

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FISH AND FISH INSPECTION. John D. Syme. London: H. K. Lewis, 1949. 162 pp. 90 illus. Price, 18s net.

GROUP MEDICINE AND HEALTH INSURANCE IN ACTION. Robert E. Rothenberg and Karl Pickard. New York: Crown Publishers, 1949. 278 pp. Price, $5.00.

HEALTH GUIDES AND GUARDS. (4th ed.). Francis P. Wall and Louis D. Zeidberg. New York: Prentice-Hall, 1949. 379 pp. Price, $3.00.

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INDUSTRIAL HYGIENE AND TOXICOLOGY. Vol. II. Frank A. Patty, Editor. New York: Interscience, 1949. 1114 pp. Price, $15.00.

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LENGTH OF LIFE. (rev. ed.) Louis I. Dublin, Alfred J. Lotka, and Mortimer Spiegelman. New York: Ronald Press, 1949. 379 pp. Price, $7.00.

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REHABILITATION OF THE PATIENT, THE. Caroline H. Elledge. Philadelphia: Lippincott, 1949. 107 pp. Price, $2.50.

ROSE'S LABORATORY HANDBOOK FOR DIETETICS. (5th ed.) Clara Mae Taylor and Grace MacLeod. New York: Macmillan, 1949. 339 pp. Price, $5.00.

SELF-TEACHING TESTS IN ARITHMETIC FOR NURSES. (3rd ed.) Ruth W. Jessee. St. Louis: Mosby, 1949. 122 pp. Price, $2.00.

STANDARDS AND LABELS FOR CONSUMERS' GOODS. Jessie V. Coles. New York: Ronald Press, 1949. 543 pp. Price, $5.00.

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REPORTS RECEIVED

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Motion Picture Film Reviews

HOMER N. CALVER, *Review Editor*

Why Won't Tommy Eat?—How food habits develop. Color. Sound. 19 minutes. 16mm. Produced by the National Film Board of Canada. Available for loan; $5.00 for show day plus postage prepaid; for purchase, $112.50.

This attractive color film was produced by the National Film Board of Canada to give parents, educators, health and welfare workers, an insight into the importance of environment, methods of feeding and attitudes of parents and other adults in building good food habits in children. It shows Tommy, a thin little elementary school child, who refuses his lunch, and who is taken to the family physician by his worried mother. In flashbacks the commentator describes the importance of the right attitudes and methods of feeding from infancy onward, and the dangers and results of a tense, unhappy atmosphere and unwholesome methods. In the end, mother revises her methods and Tommy is beginning to respond to the improved environment.

On the whole, the film accomplishes its purpose and should prove of value in adult education programs, inservice teaching programs and in high school and college classes.

In general, it depicts normal middle class homes, and practical suggestions are offered for the problems which arise. The settings are in rural and suburban areas and some explanation will be needed for crowded urban situations.

G. DOROTHY WILLIAMS

You Can Help—An account of the organization and activities of the National Tuberculosis Association. One reel. Black and white. Sound. 10 minutes. 16 mm. Produced by the National Tuberculosis Association for showings in the United States. Available for short term loan (2 weeks) or for purchase from N.T.A., 1790 Broadway, New York 19, N. Y., for $18.

Beginning with brief historical references to the development of our knowledge of the nature and diagnosis of tuberculosis (Hippocrates, Laennec, Villemin, Pasteur, Koch, Trudeau), the story brings us to the creation of the N.T.A. The functions of the organization in case finding, education, research, rehabilitation and so forth are pointed out. Finally, the relations between national, state, and local organizational levels and allocation of funds are reviewed.

This film would appear most suitable for areas where the official agency program is poorly developed. It is the feeling of the reviewers that too much stress has been placed on the service aspect of the tuberculosis associations' activities and not enough on the educational aspect. One wishes that the treatment section had either been better developed or omitted. Attention is called to the fact that the indicated financial division between the local and national organizations is no longer correct.

The camera work is good. The film is adequately edited. It is suitable for showing to semi-professional groups, P.T.A. and other adult groups, and high school students.

ARTHUR B. ROBINS, M.D.
GEORGE ROSEN, M.D.
CORINNE N. SAWYER, R.N.

RECENT HEALTH MOTION PICTURE RELEASES

Oncoming Generation — Color, sound, 16 mm., 17 minutes. Produced by Brandon Films, 1600 Broadway, New York City. Story of Winifred Wheeler Day Nursery.

Skin Antiseptics—Black and white, sound, 16 mm., 31 minutes. Produced by Audio Productions, Inc., 630 Ninth Avenue, New York City 19. Evaluation of effectiveness of some widely employed antiseptics.

Posture and Personality—Color, sound, 16 mm., 11 minutes. Produced by Social Science Films, 4030 Chouteau, St. Louis, Mo. Shows influence of posture on personal appearance.

PRODUCED BY NATIONAL FILM BOARD OF CANADA, 1270 AVENUE OF THE AMERICAS, NEW YORK CITY 20, AND 400 WEST MADISON STREET, CHICAGO 6, ILL.

The Feeling of Hostility—Black and white, 16 mm., 32 minutes. A case history of an outwardly successful but inwardly incomplete personality.

Out Beyond Town — Black and white, sound, 16 mm., 10 minutes. Guarding against disease on the farm.

PRODUCED BY COMMUNICABLE DISEASE CENTER, U.S.P.H.S., 605 VOLUNTEER BUILDING, ATLANTA 3, GA.

Concrete Ditching for Malaria Control—Color, sound, 16 mm., 7 minutes. Demonstrates principles involved in construction of a concrete ditch.

Hand Ditching for Malaria Control — Color, sound, 16 mm., 6 minutes. Encourages hand ditching in appropriate situations.

Malaria Control on Impounded Waters—Color, sound, 16 mm., 22 minutes. A short version of the five chapter film "Malaria Control in the Kentucky Reservoir."

Sewage Treatment — Black and white, sound, 16 mm., 5 minutes. Demonstrates principles of sewage treatment.

Use of Aircraft for Insect Control Part I —Black and white, sound, 16 mm., 13 minutes.

Use of Aircraft for Insect Control Part II —Black and white, sound, 16 mm., 14 minutes. These films depict general techniques, materials, and equipment developed in the use of aircraft for mosquito control.

Laboratory Diagnosis of Tuberculosis—Preparation of Culture Media — Black and white, sound, 16 mm., 14 minutes. Technique of diagnosis of tuberculosis with an improved culture medium.

PRODUCED BY CORONET FILMS, CORONET BUILDING, CHICAGO 1, ILL.

Attitudes and Health—Color or black and white, sound, 16 mm., 10 minutes. Shows the relationship of attitudes to health.

Cleanliness and Health—Color or black and white, sound, 16 mm., 10 minutes. The importance of cleanliness to good health.

Exercise and Health—Color or black and white, sound, 16 mm., 10 minutes.

Rest and Health—Color or black and white, sound, 16 mm., 10 minutes.

Danny's Dental Date—Dental Care for Children—Color. 20 min. Colorado State Department of Public Health, Denver, Colo.

ASSOCIATION NEWS

APPLICANTS FOR MEMBERSHIP

The following individuals have applied for membership in the Association. They have requested affiliation with the sections indicated.

Health Officers Section

Joseph C. Anderson, M.D., 218 West High St., Ebensburg, Pa., District Medical Director, Dept. of Health, State of Pennsylvania

A. B. Colyar, M.D., Pittsburg County Health Dept., McAlester, Okla., Director, Pittsburg-McIntosh County Health Dept., State Dept. of Health

George L. Duggan, M.D., 65 Kirk St., Lowell, Mass., Director of Health, City of Lowell

Robert M. Dunlap, M.D., 746 Mayberry Lane, East Liverpool, Ohio, Commissioner of Health, Dept. of Health, Columbiana County General Health District

B. C. Farrand, M.D., P. O. Box 205, Jordan, Mont., Physician, Private Practice

Roman Filipowicz, M.D., Sanatorio Antituberc. de Oriente, Cumana, Sucre, Venezuela, S. A., Phthisiologist, Chief of Service, Sanatorio Antituberculoso de Oriente

Guy V. Gooding, M.D., Kenansville, N. C., Health Officer, Duplin, N. C.

Carolyn C. A. Hays, M.D., 1119 Nezo, Oklahoma City, Okla., Asst. County Health Officer

W. P. Jackson, M.D., Bedford-Franklin Health District, Bedford, Va., Health Officer, State Health Dept.

David D. Lancaster, M.D., P. O. Box 249, Raton, N. M., District Health Officer, District 9

Capt. Alois Peczenik, Medical Section, Hqs. Fifth Army, Chicago 15, Ill., Preventive Medicine Division

Benedict Ramin, M.D., 400 Wellesley Ave., Wellesley Hills, Mass., Area Section Chief, Tuberculosis, Veterans Administration

Gustavo A. Rovirosa, M.D., M.P.H., 314 U. S. Court House, El Paso, Tex., Liaison Officer and Epidemiologist, Pan American Sanitary Bureau

Albert W. Sweet, Jr., Boro Hall, Rutherford, N. J., Health Officer

William J. Young, Jr., 40 Baker Ave., Dover, N. J., Health Officer, Dover Board of Health

Laboratory Section

Curtis A. Bartholomew, Sc.D., 71 E. Front St., Red Bank, N. J., Medical Technologist and Laboratory Director, Red Bank Clinical Laboratory

Thomas J. Costello, 223 Water St., Perth Amboy, N. J., Sanitary Inspector and Laboratory Technician, Health Dept., City of Perth Amboy

Edward C. Curnen, Jr., M.D., Yale University School of Medicine, 789 Howard Ave., New Haven, Conn., Assoc. Professor of Pediatrics and Preventive Medicine

Theodore J. Curphey, M.D., Meadowbrook Hospital, Hempstead, N. Y., Chief Medical Examiner, Nassau County

Rhett G. Harris, Ph.D., Medical College of South Carolina, Charleston, S. C., Assoc. Professor of Bacteriology

Michael Horti, M.D., 98-27 Jamaica Ave., Richmond Hill 18, N. Y., Owner and Director, Horti Laboratories

Wilhelmina B. Jackson, State Health Dept., Div. of Labs. and Research, Albany 1, N. Y., Junior Bacteriologist

Edward M. Lavor, Tucson Medical Center, Tucson, Ariz., Senior Laboratory Technician

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Edgar R. Maillard, M.D., C.M., 318 Fulton Ave., Hempstead, N. Y., Director, Nassau County Division of Laboratories and Research

Robert F. Malburg, 5210 S. St. Andrews Place, Los Angeles 37, Calif., Medical Laboratory Technician, John E. Mullin Clinical Laboratories

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Alfred M. Wallbank, B.S., 111 Marston, Detroit 2, Mich., Bacteriologist and Head of Allergy Dept., Barry Laboratories, Inc.

Vital Statistics Section

Guillermo E. Beleno, C., M.P.H., Panama Health Dept., Mail Box 935, Panama City, Panama, Technical Chief, Vital Statistics Section

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Engineering Section

John J. Baffa, B.S., 75 West St., New York 6, N. Y., Consulting Engineer, Water and Sewerage Works

Robert L. Bogle, Box 97, Augusta, Ark., Sanitarian, Dist. 11, State Board of Health

Wilson F. Bow, M.S., 7713–18 N.W., Seattle 7, Wash., Engineer in charge, Sanitary Engineering Section, State Dept. of Health

Harbey R. Cohen, M.S., New Jersey Health Dept., Environmental Sanitation, Trenton, N. J., Sanitary Engineer

Frank L. Fenn, Jr., Naval Training Center, Unit 4, Bldg. 200, Great Lakes, Ill., Asst. to Officer in charge, Navy Epidemic Disease Control

Harry K. Gidley, M.S., 4907 Noyes Ave., Charleston, W. Va., Acting Director, Division of Sanitary Engineering, Dept. of Health

Richard F. Jackson, B.S., 5 Wallis Court, Lexington, Mass., Sanitarian, Lexington Health Dept.

Robert W. Lamberton, M.S., 651 S. Brentwood Blvd., Clayton, Mo., Director of Sanitation, St. Louis County Health Dept.

Lorenz E. Ordelheide, C.E., 701 Ewing Drive, Jefferson City, Mo., Director, Section of Environmental Sanitation, Division of Health

Peter G. Stevenson, M.S.P.H., 217 S. Park, Fort Lupton, Colo., Public Health Engineer, Weld County Health Dept.

Robert S. Taggart, C.E., 14 Girard Place, Maplewood, N. J., Asst. Sanitary Engineer, National Biscuit Co.

Industrial Hygiene Section

Edward J. Czarnetzky, Ph.D., 4100 S. Ashland Ave., Chicago 9, Ill., Chief Biologist, Wilson and Co., Inc.

George W. Stober, M.D., 10660 Carnegie Ave., Cleveland 6, Ohio, Director of Health, City of East Cleveland

Food and Nutrition Section

Elmer Alpert, M.D., 39 E. 75th St., New York 21, N. Y., Physician, Nutrition Clinic, Dept. of Health, City of New York

Margaret R. Ellison, 92 Grand St., Reading, Mass., Nutritionist, Massachusetts Dept. of Public Health

Elisabeth L. Maughs, M.A., Division of Health, Jefferson City, Mo., Nutrition Consultant

Dorothy G. Pickup, M.S., 184 Martine Ave., White Plains, N. Y., Nutritionist, Westchester County Dept. of Health

Sophia M. Podgorski, B.S., 156 Sheridan St., Wilkes-Barre, Pa., Staff Nutritionist, Pennsylvania Dept. of Health

Jose M. Portilla, M.D., Madrid 233, Quito, Ecuador, S. A., Director, Institute of Nutrition of Equador

Martha J. Thomason, M.S., 67 Main St., Brattleboro, Vt., Nutritionist, Nutrition Branch, P.H.S., F.S.A.

Eugenia Whitehead, M.S., 695 Huntington, Boston 15, Mass., Research Fellow in Nutrition, Harvard School of Public Health

Maternal and Child Health Section

Hector Acuna, M.D., Dwight 269, New Haven, Conn., Student, Yale Medical School

Betty Price Carlin, M.D., 4475 West Pine Blvd., St. Louis, Mo., Director of Maternal and Child Health, St. Louis County Health Dept.

Geoffrey W. Esty, M.D., 1004 Broad St., Bank Bldg., Trenton, N. J., Director, Bureau of Constructive Health, State Dept. of Health

Joseph Finberg, M.D., 609 Stratford Place, Chicago, Ill., Bureau Chief, Child Welfare Section, Chicago Health Dept.

Cornelia Goldsmith, B.S., 156 East 52nd St., New York, N. Y., Chief, Division of Day Care and Foster Homes, New York City Dept. of Health

Barbara M. Korsch, M.D., 26 Bank St., New York, N. Y., Research Assoc., American Public Health Assn.

James G. Matthews, D.O., 15885 Woodward, Highland Park 3, Mich., Osteopathic Physician

Public Health Education Section

Said Abdou, M.B., D.P.H., Abbrasieh Faculty of Medicine, Cairo, Egypt, Asst. Professor of Public Health

Ben Ansley, Jr., M.S.P.H., City-County Health Dept., Columbus, Ga., Health Educator

Maisie Bookhardt, M.S.P.H., State Dept. of Education, Columbia, S. C., Health Education Consultant

William D. Bryant, Ph.D., 919 Baltimore Ave., Kansas City, Mo., Exec. Director, Community Studies, Inc.

Francis A. Culver, A.B., 1790 Broadway, N.T.A., New York 19, N. Y., Consultant in Health Education, National Tuberculosis Assn.

Henry B. Farley, M.S., 48 Willow Ave., Hempstead, N. Y., Health Educator

Renee Grant, A.B., 273 Cypress Ave., New York, N. Y., District Secretary, Health Council of Greater New York

Eva V. Higdon, M.P.H., Alamance County Health Dept., Graham, N. C., Senior Public Health Educator

Joseph K. Hill, Ph.D., 7 Marvelwood Drive, New Haven, Conn., Instructor in Public Health, Yale Univ.

Gladys Hudgins, B.S., Box 303, Chickasha, Okla., Exec. Secy., Tuberculosis Assn.

Frances Kord, B.A., 42 Howe St., New Haven, Conn., Student, Yale Univ. School of Public Health

Frances Simmons McConnell, A.B., 1801 16th St., N.W., Washington 9, D. C., Interested Citizen

Brooklyn T. McMillon, M.S.P.H., 306 Pekoe St., Durham, N. C., Instructor, Dept. of Public Health Education, North Carolina College

Muriel E. Nelson, B.S., 2505 Parker St., Berkeley 4, Calif., Asst., School of Public Health, Univ. of California

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Alfred E. Tomkins, B.S., 69 W. Washington St., Chicago 2, Ill., Campaign Director, Chicago Heart Assn.

John L. Wallace, M.A., 81 Lent St., Poughkeepsie, N. Y., Health Education Secretary, Dutchess County Health Assn.

Betty T. Wells, B.S., 1743 Algonac Road, Cleveland 12, Ohio, Health Educator

Daniel A. Williams, M.S.P.H., 1612 Fayetteville St., Durham, N. C., Director, Dept. of Public Health Education Techniques Laboratory, North Carolina College

Public Health Nursing Section

Lucy E. Blair, M.A., R.N., 124 W. 74th St., New York 23, N. Y., Consultant, Joint Orthopedic Nursing Advisory Service, National Organization for Public Health Nursing

Dorothy Boone, B.S., R.N., State Board of Health, Raleigh, N. C., Consultant Nurse

Betsy B. Boylin, M.A., Division of Health and Welfare, 1 Madison Ave., New York, N. Y., Mental Hygiene Consultant, Metropolitan Life Insurance Co.

Ada S. Endres, B.S., 1815 20th St., Everett, Wash., Public Health Nurse, Snohomish County Health Dept.

Elizabeth M. Fenlason, M.A., 685 High St., Newark, N. J., Director, School of Nursing, Hospital of St. Barnabas

Ella Harmon, B.S., 1045 S. Harlem Ave., Forest Park, Ill., Supervising Nurse, Metropolitan Life Insurance Co., Oak Park, Ill.

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Olive C. Hopkins, 16 N. Main St., Brewster N. Y., Public Health Nurse, District Nursing Assn. of the Town of Southeast, Inc.

Willie Mae Isenhower, R.N., B.S., 402 Moody, Shelbyville, Tenn., Senior Public Health Nurse, Bedford County Health Dept.

Anne Lamb, N. C. State Board of Health, Raleigh, N. C., Consultant Public Health Nurse

M. Alice Moore, R.N., Clarion, Iowa, Public Health Nurse, Wright County Nursing Service

Mary W. Morton, B.S., 1638 Monson Court, Willow Village, Mich., Staff Nurse, Washtenaw County Health Dept.

Elizabeth P. Overby, B.S. in N., Butler Memorial Hospital, Baroda Residency, India, Public Health Nurse (Missionary), Gujarat Conference Health Promotion, Methodist Church

Mabel Patton, State Board of Health, Raleigh, N. C., Consultant in Public Health Nursing

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Agatha H. Swartwood, City Hall, Saginaw, Mich., Director, Division of Public Health Nurses, Saginaw City Health Dept.

Frances Titus, B.S., Dept. of Health, Mineola, N. Y., Asst. Director, Public Health Nursing, Nassau County Dept. of Health

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Epidemiology Section

Ger Au Chan, M.D., M.P.H., Nassau County Sanatorium, Farmingdale, L. I., N. Y., Resident Physician

Ralph Gregg, M.D., Foreign Quarantine Division, F.S.A., P.H.S., Washington 25, D. C., Asst. Chief

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School Health Section

Norman C. Bullock, M.D., Civic Center, Dept. of Public Health, San Diego 1, Calif., Director of School Health Services

Allan R. Cunningham, M.D., 76 Church St., Winchester, Mass., Public Health Physician, Director, Bureau Health Information, Massachusetts Dept. of Public Health

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LaMont Whittier, M.D., P. O. Box 1514, Balboa, Canal Zone, School Physician, Canal Zone Schools

Dental Health Section

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James F. Lewis, D.D.S., F.S.A., P.H.S., Division of Dental Resources, Washington, D. C., Chief

Medical Care Section

Eugene B. Crawford, B.S., Box 540, Chapel Hill, N. C., Exec. Vice President, Hospital Saving Assn. of North Carolina, Inc.

Hari Eklund, 24 Ridgeview Ave., White Plains, N. Y., Editor and Publisher, The Nursing Home Magazine

J. DeWitt Fox, M.D., 6856 Eastern Ave., N.W., Washington 12, D. C., Editor, Life and Health

Channing Frothingham, M.D., 101 Bay State Road, Boston 15, Mass., Practising Physician

Joseph P. Hart, 528 Market St., Paterson 3, N. J., Asst. Director, Paterson General Hospital

Benjamin Haskel, A.M., 818 13th St., N.W., Washington 5, D. C., Director of Research and Education, United Textile Workers of America

Franklin P. Iams, M.H.A., 593 Eddy St., Providence, R. I., Asst. to the Director, Rhode Island Hospital

William F. Irwin, B.S., 301 S. 21st St., Philadelphia 3, Pa., Exec. Secy., Philadelphia County Medical Society

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Arlene Miller, M.S., 300 East Armour, Kansas City, Mo., Senior Medical Social Worker, Social Service Dept.

Karl Pickard, 71 Willow St., Brooklyn, N. Y., Secy., Central Medical Group, Brooklyn

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Ann Petrina Madsen, B.S., 130 East 22nd St., New York, N. Y., Director, Divisional Activities, Health Council of Greater New York

S. Sidney Newhouse, M.A., 316 Central Bldg., Fort Wayne, Ind., Assoc. Director and Council Secretary, Allen County Community Chest and Social Planning Council

Nathan M. Simon, B.S., 227 McKinley Ave., New Haven, Conn., Student, Yale Univ. Graduate School

Robert C. Tschudin, A.B., Box 2360, Route 6, Sappington 23, Mo., Admin. Asst., St. Louis County Health Dept.

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EMPLOYMENT SERVICE

The following pages present information for those seeking qualified public health personnel and for those seeking positions in public health.

This is a service of the Association conducted without expense to the employer or employee.

Address all correspondence to the Employment Service, A.P.H.A., 1790 Broadway, New York 19, N. Y., unless otherwise specified.

POSITIONS AVAILABLE

Public Health Physician for training in psychiatry at North Carolina medical centers while working in the State Mental Health Program. Must be licensed to practise in the state or eligible for reciprocity. Write: J. W. R. Norton, M.D., State Health Officer, State Board of Health, Raleigh, N. C.

Assistant Stream Pollution Control Engineer for West Virginia Water Commission. Degree in Sanitary, Public Health, or Chemical Engineering necessary. Experience in stream pollution control or public health desirable. Salary $3,200 to $4,200 plus expenses. Write: West Virginia Water Commission, 1806 Washington St. East, Charleston, W. Va.

Public Health Nurse. Salary range $220–$265 per month. Automatic salary increases; cost-of-living salary adjustments semiannually; adequate mileage allowance; retirement program. Write: Personnel Division, City Hall, Madison 3, Wis.

Public Health Nurse—Salary $200–$245 plus $44 monthly car allowance. Civil service examination required. Negro nurse from the South preferred. Write: Olivia Smythe, R.N., Director, Division of Public Health Nursing, City Health Department, Dallas, Tex.

Assistant Sanitary Engineer — Three years' public health experience required with graduate degree accepted as one year. Will work on water supply and sewerage. Good opportunity for varied experience. Starting salary $3,720. Write: Division of Sanitary Engineering, State Health Dept., Charleston 5, W. Va.

Three Staff Nurses for generalized public health nursing program adjacent Washington, D. C. Three weeks' paid vacation, sick leave, 40 hour week, merit salary increases, opportunity to attend universities part-time. Must own car. Write: Personnel Director, Arlington Court House, Arlington, Va.

Public Health Nurses for positions under excellent supervision in southwestern Michigan county, 135 miles from Chicago. Write: Director, St. Joseph County Health Dept., Centreville, Mich.

Staff School Nurse for small, well organized school health department. Beginning salary $2,850–$3,200 depending on training; 35 hour week; two weeks' vacation Christmas, one week Easter. Annual increment for 10 years up to $5,000; tenure after three years. B.A. and P.H.N. degrees, own car. Send photograph, age, degrees, training and experience, marital status, number of children. Write: **Box A-72,** Employment Service, A.P.H.A.

Health Commissioner for newly formed Health Unit. Population about 80,000. Write I. J. Markel, M.D., Chairman, Elkhart County Public Health Unit, Elkhart, Ind.

1. **Health Education Supervisor**—$350–$430. Director of state-wide health education program. College graduation in science or education and completion of graduate work to the level of a Master's degree in public health education, plus three years of experience in public health education or related educational work.

2. **Vital Statistics Registrar**—$330–$410. Director of state vital statistics department. College graduation plus two years of vital statistics experience required. **For both above positions write:** Robert R. Johnson, Director, State Civil Service Commission, 444 Center St., Salem, Ore.

Public Health Nurses for rural positions; must own car; liberal travel allowance in addition to annual salary. Forty hour week; merit system and retirement plans in effect. Salary ranges: Senior—$275–$315; Junior—$250–$290. For application and full details write: Director of Nursing, State Dept. of Health, 53 Sierra St., Reno, Nev.

Public Health Nurses for City-County Health Department. Excellent opportunities for growth in a generalized program under qualified supervision. Near state university and colleges offering extension courses. Approved field training area for postgraduate and graduate students. Write: Medical Director, Calhoun County Health Dept., City Hall, Battle Creek, Mich.

School Physician—Salary range $5,100–$6,500; 7 weeks' vacation. Male. Write: L. M. Corliss, M.D., Director of Health Service, Denver Public Schools, 414–14th St., Denver 2, Colo.

Assistant Director for a private Visiting Nurse and Tuberculosis Association. A degree and at least one year of supervisory experience in a private organization required. Salary based on qualifications and experience. Retirement plan, 5 day week; liberal vacation and sick leave. Write: Visiting Nurse and TB Assn., 115 E. Church St., Elmira, N. Y.

Public Health Medical Officer, Grades 1 and 2. Grade 1 pays $481–$584; Grade 2 pays $530–$644. For further information write: Recruitment Section, California State Personnel Board, 107 State Bldg., San Francisco 2, Calif.

Public Health Nurse. Salary $245–$285 monthly. Applications are obtainable from the Personnel Department, Room 108, Kern County Court House, Bakersfield, Calif.

Medical Director to supervise work of a cooperative medical society in mining and farming community. Nova Scotia, with population of 15,000. Salary $12,000. Write to: A. S. MacIntyre, Managing Director, Nova Scotia Cooperative Union, Antigonish, N. S.

Public Health Nurses to fill vacancies in San Mateo County, California, adjacent to San Francisco. Population 220,000; area suburban residential. Eligibility for California registration and completion of a program of study in public health nursing approved by N.O.P.H.N. required. Salary range $252–$314 plus 8¢ mileage. Write: Martha D. Adam, Chief, Public Health Nursing Service, Department of Public Health and Welfare, P. O. Box 110, Redwood City, Calif.

Executive Officer — Minimum salary $9,000. Write: Mrs. Charlotte Holtz, Secy., State Board of Health, Portage, Mont.

District Health Officer for New York City. Apply between October 24 and November 30, 1949 — Civil Service Commission, 299 Broadway, New York City.

Dental Hygienist. Salary $2,394.00; car provided—Civil Service benefits, new office and equipment. Write: Columbia County Department of Health, 612 Warren Street, Hudson, N. Y.

Public Health Nurses — Public health certificate preferred; $232 per month if certificated, with increase to $244 after six months; must have car, 7¢ a mile; 40 hour week. **Public Health Nurse Supervisor**—college graduate, must be certificated and have two years' experience in public health nursing; own car, 7¢ per mile; $256 a month with increase to $269 after six months; 40 hour week. Write: County Civil Service Office, 242 Third Street, San Bernardino, Calif.

Announcements

The Minnesota State Civil Service Department announces an examination for the position of Dairy and Food Inspection Supervisor. Salary range is $462–$532 per month. In order to be considered in this examination, an applicant must have had at least 10 years' experience at an administrative level. College work with specialization in agriculture or one of the related sciences may be substituted for experience on a year-for-year basis up to a maximum of six years. Application blanks and complete information may be obtained at any Minnesota Employment Service office or the Minnesota Civil Service Dept., State Office Bldg., St. Paul 1, Minn.

The Detroit Civil Service Commission announces examinations to be given periodically in the following fields:

	Salary		Salary
Junior Medical Technologist	$2,950–$3,310	Public Health Nurse	$3,222–$3,582
Senior Medical Technologist	3,430– 3,967	Senior Dentist	5,020– 5,416
Nutritionist	3,300– 3,618	Junior Veterinarian	3,034– 3,434
Assistant Dietitian	3,000– 3,159	Senior Veterinarian	3,591– 4,068
Dietitian	3,282– 3,759	Junior Public Health Educator	3,277– 3,637
General Staff Nurse	3,144– 3,462	Supervising Sanitary Chemist	5,525– 5,764
Junior Public Health Nurse	2,876– 3,140		
Sanitary Chemist	3,849– 4,236		

Nurse and Health Educator openings announced by the United States Civil Service Commission

Beginning November 1, 1949, applications will be accepted for a staff nurse and head nurse examinations. The positions will pay $2,974 and $3,727 respectively, and are located in Washington, D. C., throughout the United States, Alaska, and the Panama Canal Zone. Detailed information and application forms may be obtained from first- and second-class post offices, all Civil Service regional offices, or the U. S. Civil Service Commission, Washington 25, D. C. Applications must be received in the Commission's Washington office not later than December 20, 1949.

Applications for the position of Public Health Educator will be accepted until further notice. Salaries range from $4,479 to $7,432, and positions are in the U. S. Public Health Service, Federal Security Agency in Washington, D. C., and throughout the United States. No written test is required for this examination. To qualify, applicants must have successfully completed at least one year of graduate study in public health education in an accredited school of public health. In addition, they must have had professional experience in the fields of public health, public health education, education, community organization, social work, or information work related to public health. Part of the experience required for positions paying $5,232 and $6,235 and all of the experience required for positions at $7,432 must have been in health education. Experience in administering a health education program is also required for positions at the two top salary levels. Further information and application forms may be secured at most first- and second-class post offices, from Civil Service regional offices, or from the U. S. Civil Service Commission, Washington 25, D. C.

Health Educator and Scientist examinations for the Commissioned Corps, U. S. Public Health Service

Examinations for Sanitarians (Health Educator) in the Regular Commissioned Corps of the U. S. Public Health Service will be held December 12–14 in various cities throughout the country. Completed applications must be in the Washington Office by November 14. Entrance pay is $4,486.56 for Assistant (with dependents), and $5,346 for Senior Assistant (with dependents). Applicants must have had at least 7 years' post-high school training and experience, including a master's degree from an approved Graduate School of Public Health. For application forms and additional information write to: Surgeon General, U. S. Public Health Service, Federal Security Agency, Washington 25, D. C. Attention: Division of Commissioned Officers.

Examinations for Scientists and Sanitarians (Chemists and Biochemists) in the U. S. Public Health Service will be held January 9–11 in various cities throughout the country. Completed applications must be in the Washington Office by December 12, 1949. Entrance pay is $4,486.56 for Assistant (with dependents) and $5,346 for Senior Assistant (with dependents). For application forms and additional information write to: Surgeon General, U. S. Public Health Service, Federal Security Agency, Washington 25, D. C. Attention: Division of Commissioned Officers.

Examinations for Scientists and Sanitarians (Entomologists, Parasitologists, and Protozoölogists) will be held December 12–14 in various cities throughout the country. Completed applications must be in the Washington Office by November 14. Appointments are permanent and provide opportunities for career service in research and public health activities. Benefits include periodic pay raises and promotions; liberal retirement provision; medical care; annual and sick leave.

Appointments will be made in the grade of Assistant and Senior Assistant. Entrance pay is $4,486.56 for Assistant (with dependents) and $5,346 for Senior Assistant (with dependents).

Minimum requirements for Assistant and Senior Assistant Scientist are a doctor's degree and 7 years' training and experience after high school. Minimum requirements for Assistant and Senior Assistant Sanitarian are a master's degree and 7 years' post-high school training and experience.

For application forms and additional information write to: Surgeon General, U. S. Public Health Service, Federal Security Agency, Washington 25, D. C. Attention: Division of Commissioned Officers.

POSITIONS WANTED

Health Educator, woman, 24 years, M.S.P.H. (major health education). Some group work, School health and community organization experience. Write **Box HE-16,** Employment Service, A.P.H.A.

Sanitarian, B.S. 3 years' experience in a state health department as sanitation officer. Further experience in water and milk sanitation. Desires responsible position, generalized or milk sanitation program. Write: **Box S-2,** Employment Service, A.P.H.A.

Health Educator, male, age 26, B.S. and M.A. degrees, desires position in health education. Some health teaching and community work experience. Write **Box HE-17,** Employment Service, A.P.H.A.

Health Educator, male, age 35, M.S. in education, 10 years' experience with city department of health, 4 of which were in the field of community organization. Several years' teaching experience in adult education. Write **Box HE-18,** Employment Service, A.P.H.A.

Advertisement

All communications should be sent to Burneice Larson, Medical Bureau, Palmolive Building, Chicago 11, Ill.

Opportunities Available

PUBLIC HEALTH PHYSICIANS FOR THE FOLLOWING: (a) To serve as administrative chief of all public health activities; county population 350,000; headquarters in university and resort city of 185,000; minimum $8,500. (b) For administrative appointment; South America. (c) Director, university health service; student enrollment 9,000; excellent facilities; opportunity for developing efficient program. (d) School physician; Chicago area. (e) Part-time appointment; city health department, Florida. (f) Director of maternal and child health, pediatric and school health program; college town, 60,000, Middle West. (g) Health commissioner; university town of 125,000; Middle West. (h) Director, school health program; enrollment more than 12,000; winter resort town, Southwest. (i) For administrative appointment; one of national professional organizations; considerable field work. (j) For administrative positions; city and county health departments; $8,000–$10,000; East. (k) Assistant health officer; residential town, short distances several large cities, East; $7,000. (l) District health officer; well established, full-time health departments; interesting location, Pacific Northwest; $8,000–$10,000, traveling expenses. PH11-1 Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

WANTED—(a) Health educator and, also, two sanitarians; county health department; county equally divided between rural and urban; rich agricultural section; two universities; Middle West. (b) Health educator to direct community health education program including school health; university town, 70,000, South. (c) Field supervisor, tuberculosis association; duties include supervising staff of field workers, serving as special consultant. (d) Public health laboratory technician; county health center, Pennsylvania. (e) Statistician to direct division of vital statistics, state department of health; $5,100. (f) Health educator to direct industrial health service, metropolitan and tuberculosis health association; East. PH11-2 Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

PUBLIC HEALTH NURSES FOR THE FOLLOWING: (a) To succeed director, visiting nurse association; staff of fourteen; university town, Middle West. (b) To direct generalized public health program, county department; headquarters in college town, Northern California; $4,200–$4,800. (c) To direct school health program, public schools; small town located on coast of California. (d) Assistant supervising nurse and, also, two staff nurses; county health department; two universities; rich agricultural section; excellent working conditions; Middle West. (e) To direct generalized public health program; college town of 80,000, metropolitan area of East. (f) Four staff nurses; county health department; college town, California. (g) To direct public health nursing program; should be experienced in directing generalized program; eastern university. (h) To direct visiting nurse association; California. (i) Assistant supervising nurse and, also, two staff nurses; county health department; two universities; rich agricultural section; excellent working conditions; Middle West. PH11-3 Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Opportunities Wanted

Dentist; interested and qualified public health and children's dentistry; B.A., D.D.S., M.A., Ph.D., leading schools; year's residency in children's dentistry; teaching experience; research has been particularly concerned with administrative and educational problems in connection with children's dental programs in under-developed areas; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Health educator; M.S., D.P.H.; one year, research fellow and two years, teaching fellow, university school of public health; five years, associate professor of hygiene and public health; several years, director, health education, state department of health; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Physician distinguished in field of public health medicine; M.S., M.D., D.P.H. degrees, leading schools; enviable career of successful experience in academic and administrative public health work; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Public health nursing administrator; B.S. (Nursing Education), M.P.H.; three years' rural nursing; four years, supervisor, city-county health unit; past several years on faculty, university school of public health nursing; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Sanitary engineer; B.S., Civil Engineering; past eight years, sanitary engineer, metropolitan health department; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Young woman physician is available for teaching or administrative post in health and physical education; B.S. (Physical Education); M.A. (Education); ten years' teaching experience in physical and health education before entering medical school; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

NEWS FROM THE FIELD

1950 WHITE HOUSE CONFERENCE

The National Committee for the Mid-Century White House Conference on Children and Youth, to be held in late 1950, is made up of 52 members appointed by President Truman. This committee met recently at the White House for two days to plan for the forthcoming Conference. A budget of nearly $413,000 was adopted of which $75,000 in Congressional appropriations is available, the rest to be secured through voluntary contributions.

The chairman of the committee is the Federal Security Administrator, Oscar R. Ewing; its secretary, the director of the Children's Bureau, Katherine F. Lenroot. Leonard W. Mayo, who is chairman of the National Commission on Children and Youth, is chairman of an 18 man Executive Committee made up of the chairman of the technical and special committees on fact-finding, communications, program, and budget and finance, as well as members at large.

The executive director of the Conference is Melvin A. Glasser, formerly with the American Red Cross; its chief consultant is Henry F. Helmholz, M.D., chief of pediatrics, Mayo Clinic; the director of fact-finding is Helen Witmer, on leave as professor of social welfare, University of California, Los Angeles; director of communications is Hiller Eldredge, who directed public relations for the American Academy of Pediatrics' study of child health.

The focus of the 1950 Conference is to consider how "mental, emotional, and spiritual qualities essential to individual happiness and to responsible citizenship" can be developed in children.

Four White House Conferences have been held; the first in 1909 stimulated the creation of the Children's Bureau, the second in 1919 speeded up public demand for child labor legislation, the third in 1930 resulted in a Children's Charter, and the fourth in 1940 was concerned with the importance of the child in a democracy.

NEW INSTITUTE FOR CHILD HEALTH RESEARCH

An announcement was made on September 14 in New York of the creation of the Playtex Park Research Institute founded by the International Latex Corporation of Dover, Dela., which will undertake a medical research program devoted to pediatric studies. According to its declaration of purpose, the objective is "the facilitation and coördination of scientific research concerning the nature, prevention, causes, treatment and cure of diseases and disorders" of infants and children, and "the factors responsible for normal growth and development in the infant." According to the announcement, the funds will not be used for buildings or equipment but will be devoted to accelerating and initiating research activity in existing publicly and privately endowed institutions.

Katherine Bain, M.D., the Director of Research and Child Development in the Children's Bureau, Washington, presided at the meeting in New York and will be chairman of the committee to study the fields requiring immediate investigation and support. Other members are Sidney Farber, M.D., of Boston; John P. Hubbard, M.D., of Philadelphia; Samuel Z. Levine, M.D., of New York; Milton J. E. Senn, M.D., of New Haven, and Joseph Stokes, Jr., M.D., of Philadelphia.

According to the announcement of the meeting, the Institute will support long-term research and provide financial sup-

port on the basis of the ability and promise of the investigator, rather than on the field of investigation.

INSTITUTE OF INTER-AMERICAN AFFAIRS EXTENDED TO 1955

According to an announcement by President Dillon S. Myer of the Institute of Inter-American Affairs, Washington, a bill was signed on September 3 after passage by Congress extending the life of the Institute of Inter-American Affairs to June 30, 1955. The Institute is currently active in 16 Latin American countries and is conducting a total of 25 work programs in coöperation with the local governments. Four of these programs are in the field of agriculture, seven in education, and 14 in health and sanitation.

According to Mr. Myer, financial contributions of the United States to these activities, which ran as high as 90 and 95 per cent of total project costs in the early days of the program, have recently been overshadowed by the steadily increasing contributions of the coöperating countries. In most cases the share of total project costs now being borne by the coöperating governments runs three to four times as great as the share borne by the United States.

The Institute welcomes inquiries from physicians, sanitary engineers, and nurses interested in discussing employment in public health work in Latin America. The address of the Institute is 499 Pennsylvania Avenue, Washington 25, D. C.

VERMONT DEPARTMENT OF HEALTH REORGANIZED

The Vermont legislature has created a new department of health to be administered by a state health commission of 7 members made up of 3 physicians, one "licensed to practise medicine and surgery," one possessing special training and ability in psychiatry, and one "licensed to practise osteopathy, surgery, and obstetrics." A fourth member must be a dentist, and the remaining three, laymen. The new department of health takes over the duties of the present public health department, the state cancer commission, the state board of mental health, the hospital survey and construction commission, the board of control of the blood plasma bank, and all health functions of the department of institutions and corrections.

The Commission, whose members serve without pay, under the law is given not only supervisory and policy making but wide administrative responsibilities. For example, one committee of the Commission is charged with the duty of bimonthly inspections of state mental hospitals and of discharging all the duties of the former board of mental health; another committee of the Commission exercises similar functions for all medical institutions under the department's control.

Under this reorganization, the Commission, with the approval of the Governor, appoints the Health Commissioner for a four year term. He must be a physician with educational and practical experience in public health. Robert B. Aiken, M.D., already serving as State Health Commissioner has been appointed to this position.

In addition to the Commissioner, the new reorganization plan calls for an executive administrator charged "with the duty of carrying out the policies formulated by the Commission that pertain to finance and administration, and such other duties as the Commission or Commissioner may direct." He is appointed for a 4 year term by the Commission, after consultation with the Commissioner, and on approval of the Governor. William A. Hill, Jr., has been appointed acting executive director.

Other bills passed provide for the construction of a state laboratory in Burlington, the creation of a division of industrial hygiene, and of a school of dental hygiene.

DUCK DISEASES ON LONG ISLAND

The New York State Department of Health, through the Bureau of Epidemiology and Communicable Disease Control, Robert F. Korns, M.D., Dr.P.H., Director, has announced that the department has been aware for a good many months of a psittacosis problem in Long Island ducks. Studies were begun more than a year ago, with Dr. Karl F. Meyer of California, and at that time over 30 per cent of the ducks examined were found to be infected with this psittacosis virus. An atypical pneumonia due to this agent was discovered in twenty individuals who had handled ducks.

According to the department, beginning in April, 1949, another obscure disease appeared in Long Island ducks. This outbreak has been widely publicized in newspaper accounts and has been described as "Newcastle disease." Newcastle virus disease of chickens has been known to be present in the chickens in New York State for at least three years, but it has not been previously described in ducks. More careful studies have brought to light the fact that the disease now occurring in Long Island ducks is not Newcastle disease, although that virus has been isolated from at least one duck. The present epizoötic strikes with devastating force, affecting ducklings between the ages of 6 and 8 days. Its virulence is typified by the experience of one duck farmer who lost 1,100 ducks in one night and on the following night an additional 800. The ducklings appear entirely normal until death suddenly overtakes them with cyanosis and convulsions. Unpublished studies in several laboratories have indicated that a new virus entity has been isolated from these ducklings and efforts are being directed toward the control of the condition which on certain farms has destroyed over 95 per cent of the ducks in this age bracket. Investigation is still in progress to decide whether a human illness is associated with the disease in ducks. No human cases of Newcastle disease either as encephalitis or as a mild influenza-like illness have been reported.

SULFA DRUG NOT IN 1949 N.N.R.

The American Medical Association Council on Pharmacy and Chemistry in the *Journal of the American Medical Association* of September 25 announced withdrawal of its acceptance of sulfathiazole and sulfathiazole sodium. These sulfa drugs, therefore, will be omitted from the Council's 1949 edition of *New and Nonofficial Remedies*. Acceptance was discontinued because less toxic sulfonamide drugs and penicillin and streptomycin are now available. It is also omitting from N.N.R., sulfonamide mixtures containing sulfathiazole or sulfathiazole sodium as involving the same risk as the drug itself.

EDUARDO LICEAGA MEDAL TO DRS. GARZA BRITO AND ITURBIDE ALVIREZ

The Dr. Eduardo Liceaga Medal for distinguished sanitary services to the Mexican nation was recently awarded in Mexico City to Dr. Angel de la Garza Brito, the Director of the School of Public Health in Mexico City under the Ministry of Health and Welfare, and to Dr. Iturbide Alvirez, General Director of Epidemiology, Department of Public Health and Welfare, Mexico City. Dr. Garza Brito is also in charge of the Sanitary Army Tactics and Technics Section, Mexican Army Headquarters.

NEW FACULTY APPOINTMENTS AT THE UNIVERSITY OF PITTSBURGH

R. H. Fitzgerald, Chancellor, and Thomas Parran, Dean of the new Graduate School of Public Health, University of Pittsburgh, have announced the following appointments to the faculty of the School.

William McDowell Hammon, M.D., Dr.P.H., as Professor and Head of the Department of Epidemiology. This will include responsibility for instruction and

research interests in the field of microbiology. The appointment is effective February 1, 1950. Dr. Hammon is a graduate in medicine and in public health of Harvard, and has served as Professor of Epidemiology and Assistant Director of the Hooper Foundation, University of California School of Medicine.

Adolph G. Kammer, M.S., M.D., as Professor and Head of the Department of Occupational Health, effective October 1, 1949. Dr. Kammer has recently been General Medical Director of the Carbide and Carbon Chemicals Corporation, South Charleston, W. Va., previous to which he was Medical Director of the Inland Steel Company, East Chicago, Ind.

DR. MOLNER APPOINTED DETROIT COMMISSIONER OF HEALTH

Joseph G. Molner, M.D., M.P.H., has been appointed Commissioner of Health of Detroit, Mich., effective September 20, succeeding the late Bruce Douglas, M.D., who was killed in August in an automobile accident.

Dr. Molner, who is a graduate in medicine of Wayne University and in public health from Johns Hopkins, has been for a number of years Deputy Commissioner of Health in Detroit. He is currently Secretary of the Health Officers Section, American Public Health Association.

DR. RUHLAND RETIRES AS WASHINGTON HEALTH OFFICER

A testimonial dinner was given to Dr. and Mrs. George C. Ruhland of Washington on the occasion of Dr. Ruhland's retirement as Health Officer at the end of September, after almost fifteen years of service. More than 400 persons attended the dinner in the Mayflower Hotel where Dr. Ruhland was presented with a testimonial from the Commissioners of the District of Columbia. Among speakers on the occasion were Dr. Leona Baumgartner, Associate Chief, U. S. Children's Bureau; Dr. Charles L. Williams, Sr., Assistant Surgeon General, U. S. Public Health Service, and Reginald M. Atwater, M.D., Executive Secretary, American Public Health Association.

WISCONSIN ASSOCIATION FOR PUBLIC HEALTH HOLDS ANNUAL MEETING

The Second Annual Meeting of the Wisconsin Association for Public Health was held in Madison at the University of Wisconsin Memorial Union, September 22 and 23. The overall title was "Looking Forward in Public Health" with special emphasis on the impact of the aging of the population on public health.

The state society of public health workers was under the Presidency, during the year, of W. D. Stovall, M.D., Madison, and Bruce Dimmitt of Green Bay was Secretary-Treasurer.

Special sessions were held on Community Planning for Adults, on the Heart Disease Program, on Cancer, on Housing, and on Accident Prevention. Out of state speakers included Leonard A. Scheele, M.D., Surgeon General U. S. Public Health Service, and Reginald M. Atwater, M.D., Executive Secretary, American Public Health Association.

INDUSTRY FINDS PUBLIC HEALTH WORTH WHILE

The Creole Oil Corp. of Venezuela, in conjunction with the Venezuelan Government, has been conducting a malaria control campaign in eastern Venezuela. The effectiveness of residual spraying with DDT is discussed by Charles L. Pool, Sanitary Engineer of the Medical Department of the Creole Oil Corp., in his report "DDT vs. Paludismo en la Division del Oriente de la Creole Petroleum Corporation, Venezuela." From 1942 to 1947 conventional malaria control measures were used, including drainage and ditching, filling, elimination of mosquito harborage, spraying of breed-

ing areas with oil and arsenic, and education. In April, 1947, spraying of homes with a DDT residual was added. The malaria incidence decreased from an average annual rate of 331 per 1,000 during the 1942–1947 period to 43 per 1,000 during the first year of use of DDT. This is a reduction of 87 per cent. The author calls attention to the need for a continuation of previously used methods to augment the use of DDT.

THIRD YEAR OF MARKLE SCHOLARS

The Markle Foundation will continue for a third year its program of 5 year grants for Scholars in Medical Science. The unique feature of this program for training promising young men and women planning for careers in teaching of medical students or medical research, is that the accredited medical schools of the United States and Canada each nominate a candidate. From this list the Scholars are chosen. No suggestions or applications from individuals are considered.

For every Scholar selected, the Foundation sets aside $25,000 to cover the 5 year period. The grant is paid to the coöperating medical school in annual installments of $5,000 for the support of the Scholar or his research.

At the present time there are 28 Scholars, 15 appointed in 1948, 13 in 1949. The number to be selected for 1950 has not been determined. All nominations should be in by December 1, 1949; selections will be made about March 1. A booklet, *Grants for Scholars in Medical Science, 1950,* giving the details is available from the John and Mary R. Markle Foundation, 14 Wall St., New York 5.

SCHISTOSOMIASIS EXPERT COMMITTEE

The Expert Committee on Schistosomiasis of the World Health Organization met for the first time at Cairo, Egypt, in late October to consider measures for the control of schistosomiasis, a parasitic disease that is endemic in many parts of Africa and Asia and that occurs also in South America and parts of the West Indies.

Dr. Willard H. Wright, director of the Laboratory of Tropical Diseases of the National Institutes of Health, research arm of the Public Health Service, is a member of the committee and attended its recent meeting. A group of investigators under his direction at the National Institutes of Health made important contributions to this country's wartime search for adequate control measures and new methods of diagnosis. The possible spread of schistosomiasis into the continental United States is a subject of continuing investigation in the NIH laboratory.

SCHOOL FOR HOSPITAL AIDES

The first class of students began their training in October, 1949, at the School for Psychiatric Hospital Aides of the Menninger Foundation, Topeka, Kan. The one year course is open to high school graduates, carries neither tuition nor maintenance but an annual stipend of $1,758, with a basic work week of 40 hours. Classes will begin each year about October 1 and April 1. Application forms and other information from Committee on Admissions, Menninger Foundation for Psychiatric Aides, Topeka, Kan.

VIRGINIA INCREASES SERVICE

The Virginia *Health Bulletin* of July, 1949, reports 8 new health districts beginning health services on July 1, each with a full-time health officer on the job. The 8 districts include an independent city and 21 counties, 8 of which had not hitherto had health services. Thus more than 130,000 persons have been added to the number living in areas that have set up at least a minimum administrative framework within which to develop local health services. Approximately 90 per cent of the state's population now has the beginning of local health protective

services. The counties without service total 22, of which 15 have made appropriations for county health departments but have been unable to find personnel with which to staff them; only 7 are without an early prospect for local health services. The 8 newly organized districts increase the total health districts by only two, since the new districts are made up in part of new combinations of counties.

IOWA'S STREAM POLLUTION LAW

The 1949 session of the Iowa legislature passed a stream and lake pollution law which went into effect in the state in July, 1949. This Act gives the State Department of Health power to prevent pollution of lakes and streams, whereas the earlier law gave it power only to clean up pollution after it occurred. Under the new law a permit is required for a new sewer or a change in an existing one that will empty into a stream or lake. It also requires treatment of domestic sewage and planning, prior to the beginning of operations, for proper disposal of industrial wastes.

ILLINOIS VETERINARIANS AND HEALTH OFFICERS GET TOGETHER

In order to clarify some of the areas of common veterinary and human medical interest and responsibility toward a better public health, the Illinois Department of Public Health is sponsoring a joint meeting of veterinarians and public health officers, November 16 and 17, in Springfield. The meeting, following immediately upon the annual conference of the Illinois Medical Health Officers' Association, will open with a joint dinner and will be followed by a one day forum on various veterinary aspects of public health. All veterinarians and public health personnel are invited. The meeting will be held at the Abraham Lincoln Hotel. Reservations can be made through the Convention Department, Springfield Chamber of Commerce.

PUERTO RICO REPRESENTATION IN SCHOOLS OF PUBLIC HEALTH

During the current academic year it is reported that seven Puerto Rican doctors are taking courses in public health in schools on the mainland. One is at Columbia University; one at Harvard University; two are at Johns Hopkins; one is at North Carolina; one in Michigan and one at Tulane.

1950 MEETING OF SOUTHERN BRANCH, A.P.H.A.

Ben Freedman, M.D., M.P.H., Secretary-Treasurer of the Southern Branch, A.P.H.A., New Orleans, has announced the decision of a recent meeting of the Executive Committee that the next Annual Meeting of the Branch is set for April 27, 28, and 29, 1950, in Birmingham, Ala.

The Branch program during the current year is operated under the Presidency of George A. Denison, M.D., Birmingham, Ala.

JOINT KANSAS AND MISSOURI MEETINGS PLANNED FOR 1950

The Kansas Public Health Association and the Missouri Public Health Association, both Affiliated Societies of the American Public Health Association, have established a special program committee for a joint meeting of the two state associations in Kansas City, Mo., April 24–26, 1950. The program committee is already at work and shortly will announce an unusually interesting group of participants for what is expected will be a sizable regional meeting.

INTERNATIONAL VD EXPERTS STUDY U. S. CONTROL PROGRAMS FOR WHO

Sponsored by the Syphilis Study Commission of the World Health Organization, 7 international physicians have completed a three month study of venereal disease control programs in this country. The WHO Expert Committee on Venereal Diseases believes that study

of control methods recently developed in the United States, particularly penicillin treatments of syphilis and evaluation of their effectiveness for national and international programs, would be of great value.

The group was escorted by the medical officer in charge of venereal disease education of the Public Health Service, Dr. P. J. Pesare. The Service's Division of Venereal Diseases, as well as the Communicable Disease Center at Atlanta, Ga., the Medical Center at Hot Springs, Ark., and the VD Research Laboratory of the Staten Island (N. Y.) U. S. Marine Hospital were in the group's itinerary. Other control centers visited were the Massachusetts and Georgia State Departments of Health, Bellevue (N. Y.) Rapid Treatment Center, the Chicago (Ill.) Intensive Treatment Center, the Johns Hopkins School of Hygiene and Public Health, Mayo Clinic, and University of Pennsylvania Institute for the study of Venereal Disease. The group's itinerary was completed by attending the third session of the WHO Expert Committee on Venereal Diseases in Washington, D. C., October 10–20.

The study group included the following international experts:

Dr. Juan M. Funes, Director, VD Rapid Treatment Center, Guatemala City, Guatemala
Dr. E. I. Grin, Director, Venereal Diseases Centre, Ministry of Health, Yugoslavia
Prof. Pierre Joulia, Professor of Skin Diseases and Syphilis, Bordeaux University, Bordeaux, France
Dr. N. Jungalwalla, Venereal Disease Adviser to the Government of India
Dr. Sidney Laird, Acting Advisor, Venereology, East Anglian Regional Hospital, Barnet Hertfordshire, England
Dr. Paul V. Marcussen, Director, Municipal VD Clinic, Copenhagen, Denmark
Dr. Tanne Ilmari Putkonen, State Hospital for V.D., Helsinki, Finland

U.S.A.F. MEDICAL SERVICE ORGANIZED

The Department of the Air Force now has its own medical service by direction of Secretary of Defense Louis Johnson, with Major General Malcolm C. Grow appointed as U. S. Air Force Surgeon General.

The Office of the Surgeon General will supervise all medical activities of the Air Force, including operation of hospitals at Air Force bases in both continental United States and overseas areas. It will also give technical supervision to the School of Aviation Medicine, Randolph Air Force Base, Randolph Field, Texas; the Aero-Medical Laboratory, Wright-Patterson Air Force Base, Dayton, Ohio; and the Arctic Aero-Medical Laboratory, Ladd Air Force Base, Alaska. The Air Force Medical Service participates in joint staffing of Army general hospitals and other joint Army medical activities, including recruiting stations, the Armed Forces Institute of Pathology, the Army Medical Center, Central Dental Laboratories, Medical General Dispensaries, the Medical Nutrition Laboratory, and the Armed Forces Medical Procurement Office.

The Office of the Surgeon General, U.S.A.F., is divided into three directorates in order to afford better flexibility and control for medical services. They are: Professional Services, Staffing and Education, and Plans and Hospitalization.

DR. WILINSKY ELECTED PRESIDENT-ELECT AMERICAN HOSPITAL ASSOCIATION

Charles F. Wilinsky, M.D., of Boston, Director of Beth Israel Hospital and Deputy Commissioner of Health of the Boston Department of Health, has been elected President-Elect of the American Hospital Association at their September meeting in Cleveland. Dr. Wilinsky is immediate Past President of the American Public Health Association.

EASTERN OKLAHOMA SANITARIANS

The Eastern Oklahoma Association of Sanitarians was organized in McAlester in August at a meeting of 14 county sanitarians and 2 county health officers.

Meetings will be held every two months to discuss new developments in the field of sanitation, and members will work out solutions to mutual problems.

Raymond L. Howell, Tahlequah, sanitarian for District 1, was elected president of the group, and B. I. Poe, Muskogee county sanitarian, vice-president.

NAS ELECTS

The following officers were elected by the National Association of Sanitarians at its 13th Annual Meeting held in Los Angeles August 15–18, 1949:

President: Edward McLarty, Sr., RS, Los Angeles
Vice-President: Fred A. Safay, RS, Jacksonville
Treasurer: Charles H. Ziegler, RS, Los Angeles
Directors (3-year term): Kenneth Quon, RS, Hawaii, J. E. Dolan, RS, Colorado, C. H. Bugbee, D.V.S., RS, Arizona
Roscoe C. Davis, RS, of Los Angeles, was reappointed Executive Secretary.

PERSONALS

CHARLES C. AGAR, associate sanitary engineer, Bureau of Environmental Sanitation, New York State Health Dept., has been made chief of the water pollution control section of that Bureau.

ANNA AMANN, has been appointed Director of the Bureau of Public Health Nursing of the New Orleans Health Department; succeeding CHRISTINE CAUSEY.†

DONALD L. AUGUSTINE, M.D.,† has been appointed Professor of Tropical Public Health at the Harvard School of Public Health. Dr. Augustine has been acting head of the department of comparative pathology and tropical medicine since 1944.

S. J. AXELROD, M.D., M.P.H., Sr. Surgeon (R)* has been appointed resident lecturer in medical economics, School of Public Health, University of Michigan, to assist with the teaching and research activities being conducted by the Bureau of Public Health Economics.

JAMES E. BAUMAN, recently retired after 55 years of service in the Ohio State Health Department as administrative assistant and legal consultant was honored with a Senate Joint Resolution in tribute and respect passed by the 98th General Assembly of Ohio.

AMOS L. BEAGHLER, M.D.,* Director of Health of Denver (Colorado) Public Schools, named when the department was organized in 1923, retired in June.

EDWARD T. BLOMQUIST, M.D.,† was recently appointed assistant chief of the Division of Tuberculosis, U. S. Public Health Service, to succeed THEODORE F. HILBISH, M.D.,† who has gone to Johns Hopkins Hospital for special training in radiology.

JAMES R. BOYDSTON and HAROLD M. PATTERSON, are new junior sanitary engineers in the Oregon State Board of Health with the State Sanitary Authority and the Engineering Section, respectively.

ROBERT H. BROAD, M.D.,† Health Officer, Binghamton (N. Y.), for the past 7 years, has been appointed health commissioner for the Ulster County Health Department, succeeding GEORGE JAMES, M.D.,* who is now assistant director of the Bureau of Epidemiology and Communicable Disease Control of the State Health Department.

MYRTLE IRENE BROWN, R.N., has joined the staff of the World Health Organization and has been detailed to the WHO Regional Office for Southeastern Asia at New Delhi, India.

G. DONALD BUCKNER,† of Floral Park, Long Island, has resigned as Secretary of the Tuberculosis Committee of the New York Tuberculosis and Health Association, New York City, where he has served for three and a

* Fellow A.P.H.A.
† Member A.P.H.A.

half years, to become Executive Secretary of the Nassau County (New York) Cancer Committee with headquarters in Mineola.

LAWRENCE C. BYRNES, who was recently graduated from the Cortland State Teachers College with preparation in health education, has been appointed to the staff of the Ulster County (New York) Tuberculosis and Health Association at Kingston.

A. F. DAPPERT,* formerly Principal Sanitary Engineer, New York State Department of Health, has been appointed Executive Secretary of the New York State Water Pollution Control Board.

BEATRICE SCHENK DE REGNIERS, formerly editorial writer for the American Book Company, is now in charge of preparation of educational materials for the American Heart Association.

MILDRED E. DOSTER, M.D., M.S.P.H.,† has resigned as Director of District Health Service No. 7, Iowa State Health Department.

ANNA DRISCOLL, retired recently after 19 years as a public health nurse in the Portville District of Cattaraugus County, New York.

THOMAS B. DUNNE, M.D.,† who has been appointed Deputy State Health Officer of Garrett County, Maryland, received the Master of Public Health degree from the Johns Hopkins School of Hygiene and Public Health in June, 1949.

JOHN C. EASON, JR.,† at present field liaison officer for the Office of International Health Relations, U. S. Public Health Service, has been named as one of five United States appointees to the fall interneship program of the United Nations, by which he is assigned directly to the secretariat of the United Nations for a period of 8 weeks for research and on-the-job training.

C. HOWE ELLER, M.D., Dr.P.H.,* Health Officer of Richmond, Va., has resigned to accept appointment as director of the Louisville-Jefferson County Health Department, Louisville, Ky., and head of the Department of Preventive Medicine and Public Health, University of Louisville School of Medicine. E. M. HOLMES, JR., M.D.,* has succeeded Dr. Eller in Richmond as Health Officer.

FRANK M. FAGET, M.D., retired on November 1 as Medical Officer in Charge of Portland (Maine) Marine Hospital after 35 years' service as a medical officer with the Public Health Service. He was succeeded by P. D. MOSSMAN, M.D.,† formerly Medical Officer in Charge of Seattle Marine Hospital.

F. R. FRECKLETON, M.D., M.P.H.,† deputy commissioner, Rensselaer County (New York) Department of Health, has also been appointed school medical director by the Board of Education, Troy, to facilitate the integration of and increase the scope of county child health and city school health services.

WALTER FURBUSH has been appointed health educator in the Cortland County (New York) Health Education Demonstration with coöperation from the New York State Committee on Tuberculosis and Public Health, the County Tuberculosis and Health Association, the Cortland County Health Department, the State Teachers' College, and other agencies.

E. GARRIDO-MORALES, M.D., DR.P.H.,* has been designated by the Public Health Service as Medical Officer in Charge of the BCG Program in Puerto Rico, at the request of JUAN A. PONS, M.D.,† Commissioner of Health of Puerto Rico.

EDWARD E. GILLICK, M.D., was recently given a testimonial dinner honoring his retirement after more than 30 years as Health Officer of Niagara Falls, N. Y.

JOHN W. GUEPE, M.D., who recently

completed work for the Master of Public Health degree at the University of Michigan School of Public Health, has been appointed Linn County (Oregon) Health Officer.

R. M. HEILMAN, M.D., Director of the Division of Hospital Facilities, Kansas State Board of Health, is on leave of absence to study for his master's degree in public health at the University of California, Berkeley.

FRANCES HELMIG, director of the Rochester (N. Y.) Rehabilitation Center, has been appointed occupational therapy consultant for the National Society for Crippled Children and Adults.

CARL E. HOPKINS, PH.D.,† who has been connected with the United Nations Mission to China has now become Associate Professor in the Department of Public Health and Preventive Medicine, University of Oregon Medical School, Portland, in the field of statistics.

FLOYD I. HUDSON, M.D.,† formerly Director of Division of Maternal and Child Health, is now Executive Secretary of the Delaware State Board of Health, succeeding EDWIN CAMERON, M.D.,* resigned to become Director of Local Health Service, Connecticut State Board of Health.

WALTER C. HUMBERT, M.D., M.P.H.,* who has been Health Officer of the Giles and Lincoln County Health Departments, Tennessee, since 1946, has resigned to become the Assistant Medical Director, Midwestern Area, American National Red Cross, St. Louis, Mo.

PAUL J. JAKMAUH, M.D.,† formerly Commissioner of the Massachusetts Department of Public Health, has been appointed a member of the States Public Health Council.

JOHN E. KINNEY has been appointed sanitary engineer on the staff of the Ohio River Valley Water Sanitation Commission, Cincinnati. He was formerly associated with Morris Knowles, Inc., Pittsburgh, Pa.

LARS LARSON, of Jamaica, L. I.,† has been appointed trainee on the staff of the State Committee on Tuberculosis and Public Health, New York City. He is completing field work for an M.P.H. at Columbia University, and has been working with the Suffolk County Tuberculosis and Health Association, Long Island, N. Y.

MURRAY STUART LAUDER, M.D.,† clinician in tuberculosis with the West Virginia State Department of Health since May, 1947, has resigned to return to Canada.

HOWARD W. LUNDY, DR.P.H.,* head of the Health Education Section, Washington State Department of Health, has resigned to accept a position with the World Health Organization. He has been succeeded by JACK E. MATHEWS,† formerly health education supervisor of the Vancouver-Clark County Health Department.

VIVIAN P. MACFAWN, State Home Demonstration Leader of South Dakota, and WALTER S. PAGE, JR.,† former executive secretary of the Passaic County (New Jersey) Tuberculosis and Health Association have been named as field consultants of the American Heart Association.

ROBERT H. MARKS, M.D.,† has returned to his position as head of the Bureau of Tuberculosis Control of the Hawaii Territorial Department of Health after a year's leave of absence as director of the Jefferson Tuberculosis Sanatorium, Birmingham, Ala.

HUBERT MARSHALL, M.D., formerly deputy chief of the public health branch of the Military Government for Germany in Berlin, has been appointed director of the tri-county Health Department (Berkeley, Morgan and Jefferson Counties, W. Va.), succeeding G. P. MORISON, M.D.,† who has served at part-time since its formation in 1948.

HELEN MARTIKAINEN,* Chairman of the Public Health Education Section of A.P.H.A., has accepted an appointment with the World Health Organization to serve as Health Education Consultant for a 2 year period beginning September 1, 1949.

DR. J. E. MCKEE, formerly Consulting Engineer for Camp, Dresser & McKee, has been appointed Associate Professor of Sanitary Engineering by the California Institute of Technology.

KNOX E. MILLER, Medical Director of the U. S. Public Health Service, now on terminal leave after 36 years of active duty with the service, has accepted the position as assistant to the State Health Officer of Florida. Dr. Miller's latest activity for the Public Health Service was a health survey of Milwaukee.

CLAUDE W. MUNGER, M.D.,† former administrator of St. Luke's Hospital, New York City, recently received the 11th annual Award of Merit of the American Hospital Association. He was cited as "eminent administrator and counsel whose energy and wisdom have immeasurably advanced education and standards of hospital administration."

AL OSTROW, staff member of the San Francisco News, has received the 1949 Lasker Award for "public information leading to public action," of the National Committee for Mental Hygiene, for his series of newspaper articles on "People in the Dark," which described conditions in California's mental hospitals.

SHELDON B. PEIZER, of New York City, who is a graduate in psychology and social sciences from the University of Chicago, has been appointed to the staff of the Rochester-Monroe County Tuberculosis and Health Association, New York.

JOHN B. PRICE, M.D., practising physician of Norristown, Pa., has been named medical director of the Montgomery-Bucks Counties State Health District, succeeding THOMAS M. THOMPSON, M.D., resigned.

FRANCES RALEY, formerly education director of the Jefferson County (Alabama) Health Department, has been appointed field training consultant in public health nursing, Oregon State Board of Health.

HOWARD A. RUSK, M.D.,† Professor and Chairman of the Department of Rehabilitation and Physical Medicine, New York University College of Medicine, in his capacity as Consultant in Rehabilitation to the Department of Social Affairs of the United Nations, recently returned from an extended trip to Austria and Poland to consult with officials of those countries and to participate in a number of special teaching seminars in rehabilitation. Dr. Rusk also conferred with officials of WHO in Geneva, and of UNESCO in Paris and observed rehabilitation activities in England.

FRED SAFAY, sanitation consultant, Florida State Board of Health, was recently elected vice president of the National Association of Sanitarians.

V. J. SALLAK,† who for the past 2 years has been personnel assistant to the New York State Committee on Tuberculosis and Public Health, has assumed a newly created position of Assistant Executive Secretary on the Buffalo and Erie County Tuberculosis and Health Association staff.

ALICE H. SANDERS† has resigned as Health Secretary of the Indianapolis, Indiana, Council of Social Agencies to become Secretary of the Health Division, Community Welfare Council, Milwaukee County, Wis.

ISADORE SEEMAN, M.P.H.,† formerly Director of the Bureau of Health Information of the Baltimore Health De-

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* Fellow A.P.H.A.
† Member A.P.H.A.

partment, is the new Executive Secretary of the Health Section, United Community Services of Washington, D. C.

CLARENCE D. SELBY, M.D.,* retired as Medical Director, General Motors Corporation, has been appointed Resident Lecturer in Industrial Health, University of Michigan School of Public Health, where he will be in charge of an expanding program of public health instruction and service in industrial health.

MILDRED SHRIVER and EUGENE J. TAYLOR† have been added to the New York office of the National Society for Crippled Children respectively as consultant in special and parent education and field representative. Mrs. Shriver, a specialist in cerebral palsy, has most recently taught the education of cerebral palsied to student teachers and parents in the University of California. Mr. Taylor is an editorial writer for the New York Times and instructor in the Division of Rehabilitation and Physical Medicine, New York University College of Medicine.

MICHAEL J. STANKEWICH,† formerly a sanitary engineer with the New York State Department of Health, and sanitary officer and lecturer in sanitary science in the U. S. Army, has been appointed Chief of the Bureau of Water and Sewage Control Engineering of the Erie County (N. Y.) Health Department.

HI EASTLAND STEELE,† formerly director, Division of Vital Statistics, West Virginia State Department of Health, is now national consultant in Vital Statistics, U. S. Public Health Service, with headquarters in Washington.

ALEXANDER J. STEIGMAN, M.D.,† has been appointed full-time consultant in clinical epidemiology for the National Foundation for Infantile Paralysis, Inc. He has recently completed a two year period as senior fellow in pediatrics with the National Research Council, working in the Children's Hospital Research Foundation in Cincinnati.

JAMES HUNTER STEWART, M.D., formerly in private practice in West Salem, Ore., was recently appointed full-time Health Officer of Polk County, succeeding a part-time health officer.

JAMES B. SWAYNE, formerly regional research consultant, Social Security Administration, in San Francisco, is the newly appointed director of vital statistics, Arizona State Department of Health.

J. A. THRASH, M.D.,* Columbus and Muscogee County Health Officer, Florida, is spending 3 months in studying health activities in Denmark, Sweden, France, and Great Britain, for WHO. He is one of two American physicians selected to study public health administration abroad.

CLARENCE J. VELZ, C.E., M.S.P.H.,* formerly Professor of Sanitary Engineering and head of the Department of Civil Engineering at Manhattan College, New York City, has been appointed Professor of Public Health Statistics, University of Michigan School of Public Health.

GEORGE VOSS, formerly assistant to the executive director, has been appointed Director of Chapters of the National Foundation for Infantile Paralysis and will continue to serve as National Epidemic Coordinator.

KENNETH S. WATSON has resigned as administrative head and executive secretary of the West Virginia Water Commission to become assistant director of the Ohio River Valley Water Sanitation Commission in Cincinnati. ROBERT F. ROCHELEAU, associate engineer with the West Virginia Commission, will be acting executive secretary until the position is filled.

HOWARD WEINDEL, Head of the Milk Sanitation Section of the Food and Drug Division, Kansas State Board of

Health, has accepted a position as Training Officer, Milk and Food Specialist, with the Public Health Service, and has been assigned to the Rocky Mountain Field Training Center, Denver.

ADOLPH WEINZIRL, M.D.,* is now devoting full time to the newly created Department of Public Health and Preventive Medicine at the University of Oregon Medical School, Portland. His title is professor of Public Health and Preventive Medicine and Head of the department.

GEORGE H. WHIPPLE, M.D., dean of the University of Rochester (N. Y.) School of Medicine and Dentistry, is the 1949 recipient of the Albert David Kaiser Medal of the Rochester Academy of Medicine for "his distinguished services to medical science and the distinction he has brought to the city through the development of the University of Rochester School of Medicine and Dentistry."

D. LAURENCE WILSON, M.D., of Kingston, Ontario, Canada, has received the 1949 Schering Research Fellowship in Endocrinology to pursue research work in the field of metabolic and endocrine diseases at Harvard University's School of Medicine, Boston.

GRETA K. YAGER, R.N.,† has been appointed health educator under the auspices of the State Committee on Tuberculosis and Public Health, and assigned to the New York State Health Department as health educator, with primary responsibility in the promotion of county health departments. Miss Yager received in 1949 from the University of Michigan the M.P.H. degree.

DEATHS

JOHN W. AMESSE, M.D., of Denver, Colo., died August 21.

THADDEUS M. KOPPA, M.D., M.P.H.,† assistant chief, Tuberculosis Section, St. Louis Area Office and former chief, Dallas Office, Veterans Administration, died July 20 (Health Officers Section).

ABRAHAM J. LEVY, M.D., DR.P.H., PH.D.,* Health Officer, Dixon State Hospital, Dixon, Ill., died August 26 at the age of 53 (Unaffiliated).

WILLIAM LEVY, M.D.,† Health Officer, Suffield, Conn. (Health Officers Section).

JOHN D. LONG, M.D., D.Sc.,* Medical Director, U. S. Public Health Service (Retired), Chief Traveling Representative, Pan American Sanitary Bureau, died September 18 at Guayaquil, Ecuador (Unaffiliated).

WILL J. MARTIN, M.D.,† City and County Health Officer of Kokomo, Ind., died August 24 (Health Officers Section).

C. E. MCNENNEY, M.D.,† Chief of Division, and Epidemiologist, Board of Health, Jersey City Medical Center (Health Officers Section).

ALBERT G. MILBANK, LL.B.,† President, Milbank Memorial Fund (Unaffiliated).

VINCENT C. MOYER, V.M.D.,† Chief Veterinarian, Supplee - Wills - Jones Milk Co., Philadelphia, Pa. (Public Health Education Section).

VICTOR C. MYERS, M.D.,† Student, School of Hygiene and Public Health, Johns Hopkins University (Industrial Hygiene Section).

RALPH R. PARKER, M.D.,† co-discoverer of a vaccine for Rocky Mountain spotted fever, died September 4 at the age of 61 (Epidemiology Section).

JOHN J. SHANK, B.S.,† Owner and Director, Wayne Laboratories, Waynesboro, Pa. (Laboratory Section).

MILDRED T. WOOLLEY, DR.P.H.,* Director of Laboratory, Long Beach (Calif.) City Health Department, died in June (Laboratory Section).

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* Fellow A.P.H.A.
† Member A.P.H.A.

CONFERENCES AND DATES

American Association for the Advancement of Science. New York, N. Y. December 26–31.

American Association of Schools of Social Work. Milwaukee, Wis. January 22–24.

American Medical Association. December 6–9. Washington, D. C.

American Public Welfare Association. Annual Round Table Meeting. Washington, D. C. December 1–3.

American Society of Tropical Medicine, The American Academy of Tropical Medicine, and the National Malaria Society. Memphis, Tenn. November 6–9.

American Water Works Association:
- Arizona Section. San Carlos Hotel, Yuma, Ariz. November 11–13.
- Florida Section. Orange Court Hotel, Orlando, Fla. November 14–16.
- New Jersey Section. Madison Hotel, Atlantic City, N. J. November 17–19.
- North Carolina Section. Highland Pines Inn, Southern Pines, N. C. November 7–9.

Community Chests and Councils of America. National Conference. Cincinnati, Ohio. February 1–4, 1950.

Illinois Public Health Association. Leland Hotel, Springfield, Ill. April 20–21, 1950.

Michigan Public Health Association. Hotel Statler, Detroit, Mich. November 9–11.

National Association of Housing Officials. Boston, Mass. November 13–16.

National Committee for Mental Hygiene. Statler Hotel, New York, N. Y. November 16–17.

National Organization for Public Health Nursing. Conference on Mental Hygiene in Public Health Nursing. New York, N. Y. November 12–18.

National Rehabilitation Association. San Antonio, Tex. November 6–10.

National Society for Crippled Children and Adults. Commodore Hotel, New York, November 7–9.

National Society for the Prevention of Blindness. New York, N. Y. December 15.

New York State Health Conference. Lake Placid, N. Y. June 5–8, 1950.

North Dakota Public Health Association. Dakota Hotel, Grand Forks. November 10–12.

Pennsylvania Public Health Association. Penn Harris Hotel, Harrisburg, Pa. November 2.

Southern Branch, American Public Health Association. Birmingham, Ala. April 27–29, 1950.

Third Inter-American Congress of Radiology. Santiago, Chile. November 11–17.

Western Branch, American Public Health Association. Portland, Ore. May 30–June 1, 1950.

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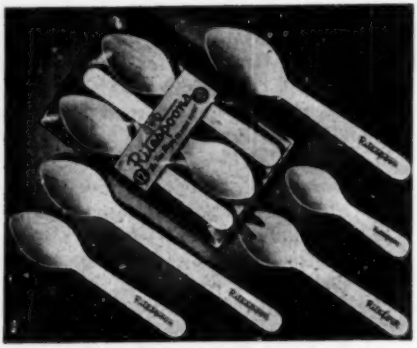

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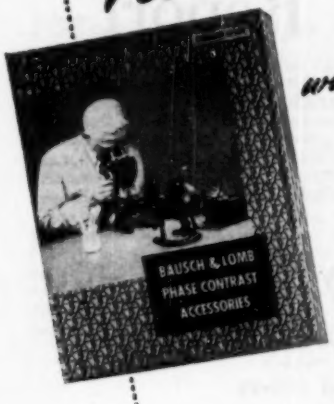

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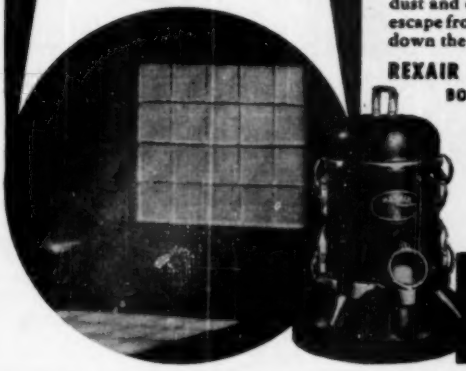

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*McLester, J. S.: Protein Comes Into Its Own, J.A.M.A. 139:897 (Apr. 2,) 1949

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